University of Alberta

Understanding Whorf's Metaphysics: Seeing the World Through Language-Shaped Glasses

by

Lisa Anne Kline ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Arts

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled "Understanding Whorf's Metaphysics: Seeing the World Through Language-Shaped Glasses" submitted by Lisa Anne Kline in partial fulfillment of the requirements for the degree of Master of Arts.

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19 July 1999

For Mom and Dad, whose encouragement and love mean so much to me

And for Jim, who brings me more happiness than words can express

Abstract

Benjamin Whorf is renowned for his doctrine of "linguistic relativity" according to which the ways individuals "see the world" are affected by the language(s) they speak. Whorf's ideas have led to scholarly discussions about "strong" and "weak" versions of a "Whorfian Hypothesis," either or both of which are assumed to be empirically testable. I believe that these latter views are radically mistaken. In my interpretation, Whorf assumes *a priori* that linguistic relativity is true. He proposes a notion of the totality of reality, a Metaphysical Hierarchy. As individuals become more linguistically sophisticated, they can "move up" in this Hierarchy, and thus become more knowledgeable about reality. Whorf's linguistic relativity is essentially *epistemological* and applies to *individuals* whose thoughts about the world may be more or less influenced by their native language. Thus, Whorf posits a single theory which allows for differing degrees of relativity.

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Introduction

Benjamin Whorf was a full-time fire prevention inspector and a part-time linguist, anthropologist, and philosopher. He is most famous for his idea of a language-based relativity. In a paper entitled "Science and Linguistics," Whorf describes some of the basic premises of his theory as follows:

> We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organised by our minds–and this means largely *by the linguistic systems* in our minds. (Whorf, 1940c, 213, my emphasis.)

Whorf then states that "[we] are thus introduced to a new *principle of relativity*, which holds that all observers are not led by the same physical evidence to the same picture of the universe" (Whorf, 1940c, 214, my emphasis). As an analogy, Whorf's theory is somewhat akin to wearing glasses that alter one's vision: the language a person speaks has an effect on the way that person experiences his or her surroundings, just as wearing glasses with different lenses (whether different coloured, or 3-D movie glasses, or kaleidoscopic lenses, etc.) affects a person's visual experience. Whorf would argue that wearing a particular "language-shaped" pair of glasses provides a different world-view than if another pair were worn. However, to see the world from different language-based perspectives cannot be performed with the same ease as simply changing glasses.

Whorf maintains that within the same "speech community" people share the same picture of the universe (Whorf, 1940c, 213). It is a matter of contention as to what, exactly, the parameters of a speech community consist in. Although Whorf says that each language has its own patterns, he lumps all "Indo-European" (or what he calls "standard average European" or "SAE" (Whorf, 1941b, 138)) languages into one group. However, he also indicates that within one speech community there may be variations in how certain individuals view the world. For example, he says that linguists, due to their familiarity with different language systems, may be "most nearly free" from the constraints their native language places upon their ability to interpret their surroundings (Whorf, 1940c, 214).

To address a point of possible confusion, there is frequent reference in the literature to "the Sapir-Whorf Hypothesis."[1] The term seems to have been coined as a catch-phrase for some general concept of linguistic relativity, loosely based on the writings of Whorf and of Edward Sapir. The latter was a linguist who worked on problems associated with the relationship between language, thought, and the world. According to Sapir:

> The "real world" is to a large extent unconsciously built upon the language habits of the group. The worlds in which different societies live are *distinct* worlds, not merely the same world with different labels attached. We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation. (Sapir, 209)

The above quote is difficult to interpret, and it is not at all clear that Sapir means anything like what (I claim) Whorf means, despite some similarities in terminology. Although Whorf was a one-time student of Sapir's, he claims to have been aware of the sorts of issues Sapir addressed prior to their acquaintance, based on personal observations he made in his work as a fire prevention inspector (Whorf, 1941b, 135). What the "Sapir-Whorf

---

[1] For example: A u (1992), Cipolla (1976), Crawford (1982), Grimshaw (1986), Kay and Kempton (1983), Khosroshahi (1989), The Linguist List internet discussion group (variously,1991-1996), Penn (1972), Pinxten (ed) (1976), Robins (1976), Stemmer (1976), Walz (1976).

Hypothesis" supposedly embodies varies from commentator to commentator. Whorf himself never uses the term "the Sapir-Whorf Hypothesis," and refers to his concept of relativity as a "principle." I shall refer to Whorf's ideas primarily as "Whorf's theory," but never as "the Sapir-Whorf Hypothesis."

I believe that previous commentators have erred in their interpretations of Whorf, and/or they have overlooked essential elements of Whorf's theory, thus misrepresenting his overall views. Within my thesis, I aim to provide a detailed analysis of Whorf's theory, outlining what I think his principle of linguistic relativity entails. I shall not specifically set out to agree or to disagree with Whorf's ideas, for my argument is not for or against Whorf; instead, it is for or against various interpretations of his theory. I mainly wish to present a certain interpretation of Whorf which shows that he has a coherent philosophical theory, which remains consistent throughout his works.

The main argument of my thesis is that, in order to understand Whorf's principle of linguistic relativity fully, one must understand the metaphysics underlying his theory. This aspect of Whorf's theory has been largely ignored, and yet I think it is a central point in explaining a number of issues, specifically, how Whorf's linguistic relativity varies in degree, and how Whorf's metaphysical claims lead to his claims about relativity in the first place. In brief, I interpret Whorf to be positing a philosophical theory embodying the concept of a language-based *Metaphysical Hierarchy* (my terminology), in which people can be said to occupy different levels based on their knowledge and use of language(s). I believe that there are two manifestations of Metaphysical Hierarchies in Whorf's theory: 1) smaller

Metaphysical Hierarchies based on individual languages; and 2) an Ultimate Metaphysical Hierarchy in which exist all the various individual-language hierarchies. According to my interpretation, Whorf believes there to be only one ultimate reality, people just see it from different perspectives. Thus, although it appears that people see different realities, they are really just seeing different aspects of one. Therefore, Whorf's linguistic relativity is *epistemological*, for it is essentially people's *knowledge* about the world that is relative depending on the language they speak. For the people involved, however, Whorf would say that they exist, at least temporarily (for some), within their own Metaphysical Hierarchies (based on the language they speak), but this does not mean that they are not a part of the ultimate Metaphysical Hierarchy (i.e., a part of the ultimate world). This interpretation has important ramifications for interpreting his various claims about linguistic relativity.

Whorf also discusses a "metaphysics," which I interpret to be the particular way a person perceives and categorises his or her experiences of things in the world (which I shall also refer to as a "world-view," as does Whorf). Whorf claims that the patterns of a language embody a certain "metaphysics," and that different languages have different inherent "metaphysics." Thus, according to Whorf, the way people perceive and categorise their experiences of the world automatically follows from the language(s) they speak, for their world-view, i.e., their "metaphysics," is essentially a part of their language.

A frequent matter of interpretive debate within the literature concerns whether Whorf posits a "weak form of linguistic relativity," or a "strong form of linguistic relativity." The weak version claims that people's thoughts and perceptions are influenced to some degree by the structure of their language. Such a claim may seem uncontentious and not worthy of a lot of fuss, perhaps prompting some critics to dismiss Whorf as simply stating the obvious. The strong form, on the other hand, states that people's thoughts and perceptions are completely bound within and determined by the structures of their language systems, and that they can *never* break free of such thought patterns. Such a radical idea may prompt critics to dismiss Whorf's views entirely. Whorf himself is possibly the cause of this confusion, in that he at times makes statements which *seem* to support both the weak and strong versions of linguistic relativity. However, I will argue that it is simply wrong to say that Whorf holds two different views embodying two different theories. Rather, I interpret Whorf as holding only one position and one theory, and that his concept of a Metaphysical Hierarchy allows for different degrees of linguistic relativity (i.e., our particular language systems influence our thoughts and perceptions to varying degrees). Within Whorf's Metaphysical Hierarchy, at lower levels, people's world-views are influenced by, and perhaps depend completely upon, a single language system, but such influence and dependence may gradually weaken as people become aware, through intuition and/or education, that they are operating within a limited framework, and thus they may rise to higher levels within the Hierarchy, characterized by weaker influence from one single language. All of this will be explained further.

Whorf seems to believe that linguistic relativity is a fact, and perhaps an obvious fact to those who study languages and/or people. Through his study of native languages and culture, Whorf gathered what he believed to be examples of linguistic relativity, showing how different grammatical form supposedly affects the individual experience of events in everyday life. His examples, I believe, are not so much an attempt to try to *prove* a linguistic relativity hypothesis, but rather, to *display* what he sees as obvious differences in interpretation of surroundings by people of different languages. His assumption that languages embody a particular "metaphysics" (i.e., world view) presupposes that grammatical/linguistic differences simply are reflected in the ways that people cognitively experience their surroundings. With that assumption in hand, Whorf then points to certain observations that he believes to be instances of the manifestations of linguistic relativity and basically says, "Look, those people cognitively experience the world that way, because that is how their language and grammar organise it."

It may be argued that for Whorf to *prove* that his theory is correct, he must somehow provide concrete evidence that differences in cognition do, in fact, occur as a direct result of the differences in a language, rather than simply assuming that they do. Various researchers, who undertake either to prove or to disprove Whorf's claims about linguistic relativity, empirically investigate languages in an attempt to determine with certainty whether or not differences in cognition occur *as a result* of differences in linguistic patterns. However, Whorf claims that it is an *a priori* truth that "metaphysics" (in Whorf's definition, one's *world-view*) and language are intertwined, thus it follows, for Whorf, that differences in perception and experience of events, and thus differences in cognition, occur when there are differences in language structure. Whorf is positing a philosophical theory about *a priori* truths that may simply not be possible to prove.

The commentaries on Whorf's work vary in their descriptions of how his linguistic relativity principle is to be interpreted. Perhaps the lack of an explicit statement in Whorf's work has led people to criticise or to support certain positions which Whorf himself may never actually have held, or at least not in the form stated by his commentators, and yet he is chastised or celebrated for them nonetheless. Max Black rather amusingly notes that "an enterprising Ph.D. candidate would have no trouble in producing at least 108 versions of Whorfianism" (Black, 30). While I have no intention to discuss quite as many different versions, I will produce a selection outlining some of the main misinterpretations/ underinterpretations of Whorf's theory, as well as those which share some of my interpretations. I shall begin with a look at some of the criticisms levelled against Whorf, and explain whether or not I think they are valid. I shall then examine some writers who find merit in Whorf's ideas. To show that the ideas with which Whorf was concerned have not been forgotten, I will also look at some of the more recent work done on the question of linguistic relativity, noting how it is similar to or different from Whorf's work.

Chapter 1

"Linguistic Relativity" and My Analysis of Whorf's Theory

In this chapter, I shall provide some general definitions for linguistic relativity, including what are commonly referred to as the "strong" and "weak" hypotheses. Although I am generally against trying to provide a concise definition for Whorf's theory, I will give a brief account of it for purposes of immediate comparison with the "strong" and "weak" forms defined below. I shall then present my explication of Whorf's theory, with a focus on his metaphysics. In my Section 1.2, I will present a fairly uncontentious reading of Whorf, outlining some of his main premises. In the Sections following, I will argue for some atypical interpretations of Whorf.

1.1 General Definitions

To find a general definition of "linguistic relativity" is not a simple task, for the precise meaning of the term seems to vary depending on the source. Discussions about linguistic relativity often refer to Whorf,[2] but problems arise when different people provide different interpretations of what the term signifies for Whorf. George Lakoff also acknowledges this difficulty, and he says:

> ...there is no single relativism, but rather dozens, if not hundreds, of versions, depending on the stand one takes on various issues. All too often, arguments against Whorf are taken to be arguments against relativism in general. And arguments against Whorf...may not be arguments against the position that Whorf advocated. (Lakoff, 328)

This is why I think that it is important to acquire a thorough understanding of Whorf, and to dispel some of the myths about his theory, before formulating arguments against the position he supposedly held.

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[2] As noted in the Introduction, discussions about linguistic relativity also often refer to the so-called "Sapir-Whorf Hypothesis."

Another problem is that people want a short, concise definition for what is, at least to Whorf, a complex theory requiring a certain amount of explanation to clarify terminology and concepts. Lakoff is also sympathetic to this view, noting that he believes Whorf to have been a complex thinker whose ideas contained many subtleties not easily summed up in short descriptions (Lakoff, 328). Lakoff maintains that, "Whorf was not an easy person to classify. To think of him just as a relativist is much too simplistic" (Lakoff, 325). Sound-bite definitions tend to mislead people as to what Whorf is all about, for simple definitions cannot possibly include the many facets of Whorf's theory. Similarly, pointing to an individual statement made by Whorf and using it as a definition for his theory is also likely to result in a superficial and possibly inaccurate account of his entire thesis. In Chapters 2 and 3, I will discuss various interpretations of Whorf (other than my own). However, I shall cite some general definitions of "linguistic relativity" in order to demonstrate common conceptions about the term.

In an essay by I.M. Schlesinger entitled "The Wax and Wane of Whorfian Views," I found a writer who, like myself, realises the difficulty in pinning down any one definition of linguistic relativity. He does, however, try to provide various possible meanings of the "linguistic relativism thesis," which I think conform to common conceptions. I have cited both the definitions given by Schlesinger as well as brief sound-bite definitions from a book by Julia Penn. In Chapter 2, I will address specific writers who maintain that Whorf possibly held both of the types of linguistic relativism cited below, and why I think such an interpretation is in error.

Strong Linguistic Relativity (or Determinism)

> All thinking goes on in language...[thus] we are completely at the mercy of language, unable to transcend the limits it imposes on us.... Languages and the world perspectives that go with them are not mutually translatable. (Schlesinger, 19)

Or, more simply:

> ...language determines thought... (Penn, 13)

Weak Linguistic Relativity

> Language creates certain cognitive predispositions...direct[ing] perception and thinking into certain habitual channels... Language draws attention to certain aspects of reality. (Schlesinger, 21)

Again, to simplify:

> ...language influences thought... (Penn, 13)

I do not interpret Whorf as positing two separate and possibly incompatible theories of linguistic relativity such as the "strong" and "weak" forms above. Whorf's single theory may be summed up as follows, all of which I will explain in detail in the following sections:

Whorf's Theory of Linguistic Relativity

> Language exists within a Metaphysical Hierarchy. A certainworld view (i.e., a "metaphysics") is inherent in each language, which provides an incomplete picture of objective (ultimate) reality. The language we speak influences the way we think about and perceive the objective world to varying degrees depending on the level we occupy within the Metaphysical Hierarchy. At lower levels, our world-view may be completely influenced by and dependent upon our language, for we may be ignorant of possible alternative world-views. At higher levels, we may acquire an expanded world-view as we first learn about the limitations and possibilities of our own language, and then, as we learn other languages, we may cross linguistic barriers, acquiring the perspectives inherent in other languages, thus acquiring a broader (or fuller) picture of objective (ultimate) reality.

Or, more simply (but much less precisely):

> Language influences our world-view to varying degrees and in different ways depending on the language we speak.

As I shall discuss, my explanation of Whorf's thesis, particularly the presumption of a Metaphysical Hierarchy, allows both his stronger statements and his weaker statements (which reflect, but are certainly not identical to, the "strong" and "weak" notions of linguistic relativity described above), to coexist in one overall theory. Unfortunately, Whorf himself never precisely defines his theory, for, as Schlesinger notes, "Whorf...was out to make a case, to provoke, to promote a new approach," rather than to provide a simplistic account of a theory (Schlesinger, 16). As a result, one must piece together the variety of statements Whorf makes throughout his works in order to create a cohesive picture. I am assuming that a cohesive picture does emerge out of Whorf's body of work, for I believe that, although he does not specifically state his theory in a concise way, there is nonetheless a cohesive conception underlying his words.

1.2 An Introduction to Whorf's "Linguistic Relativity Principle"

Whorf often discusses his ideas about how differences in languages seem to correspond with, and indeed, to cause, differences in the way people perceive their surroundings. The first published essay in which Whorf actually gives a name to his theory is entitled "Science and Linguistics," which was originally published in *Technology Review*, April 1940. In that essay, he explains his view as follows:

> We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of

> phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organised by our minds–and this means largely *by the linguistic systems* in our minds. (Whorf, 1940c, 213, my emphasis)

Whorf then states that:

> ...[we] are thus introduced to a new *principle of relativity*, which holds that all observers are not led by the same physical evidence to the same picture of the universe... (Whorf, 1940c, 214, my emphasis.)

Similar statements can be found throughout Whorf's writings. For example, from a paper predating "Science and Linguistics," called "The Punctual and Segmentative Aspects of Verbs in Hopi," Whorf says:

> We are inclined to think of language simply as a technique of expression, and not to realise that language first of all is a classification and arrangement of the stream of sensory experience which results in a certain world order, a certain segment of the world that is easily expressible by the type of symbolic means that language employs. (Whorf, 1936, 55)

In a follow up essay to "Science and Linguistics," called "Linguistics as an Exact Science," Whorf reiterates his position from the former, citing his use of the term "linguistic relativity principle," which, he says, means that:

> ...users of markedly different grammars are pointed by their grammars toward different types of observations and different evaluations of externally similar acts of observation, and hence are not equivalent as observers but must arrive at somewhat different views of the world. (Whorf, 1940b, 221)

In his last published essay, "Language, Mind, and Reality," Whorf again echoes his previous statements by saying that:

> ...every language is a vast pattern-system, different from others, in which are culturally ordained the forms and categories by which the personality not only communicates, but also analyses nature, notices or neglects types of relationship and phenomena, channels his reasoning, and builds the house of his consciousness. (Whorf, 1942, 252.)

It is therefore clear that the basic premises of Whorf's linguistic relativity theory remain consistent and persist throughout his works.

According to Whorf, within the same "speech community," people share the same world-view (i.e., they cognitively experience the world in much the same way) (Whorf, 1940c, 213). As I mentioned in the Introduction, it is a matter of contention as to what are the parameters of a speech community. Whorf says that each language has its own patterns, and yet he classifies all "Indo-European" languages into one group (which he calls "standard average European" or "SAE" (Whorf, 1941b, 138)). He believes that the common origins of European languages nullify the sort of relativity that may be found by comparing, for example, a Western European language with a Native American language (Whorf, 1941b, 138). He also claims that within one large speech community there may be variations in how certain individuals picture the world; for example, scientific sub-communities which all speak English, but use scientific terminology possibly incompatible with other scientific communities, may have somewhat different perspectives upon the world (Whorf, 1942, 246). I believe that variations within one speech community can be explained by appealing to the concepts of metaphysics inherent in Whorf's theory, as will be discussed.

Another aspect of Whorf's theory worth noting is that it is in *habitual* thought–as opposed to reflective thought–that he believes linguistic relativity to be most evident. In an essay entitled "The Relation of Habitual Thought and Behaviour to Language," Whorf says that it is in:

> ...its constant ways of arranging data and its most ordinary everyday analysis of phenomena that we need to recognize the influence [language] has on other activities, cultural and personal. (Whorf, 1941b, 135)

Whorf believes linguistic relativity to be manifest primarily through the grammar of a language (its underlying systematisation), and not (or not as much) through individual words. For example, Whorf says:

> ...the background linguistic system (in other words, the grammar) of each language is not merely a reproducing instrument for voicing ideas but rather is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions... (Whorf, 1940c, 212)

Elsewhere he says:

> ...the "patternment" aspect of language always overrides and controls the "lexation"... or name-giving aspect. (Whorf, 1942, 258)

In fact, Whorf claims that individual words have no "exact meanings" (Whorf, 1942, 258), rather their meaning depends upon the context in which they are used, and he says:

> That part of meaning which is in words, and which we may call "reference," is only relatively fixed. Reference of words is at the mercy of the sentences and grammatical patterns in which they occur. (Whorf, 1942, 259)

Whorf does, however, provide some lexical examples to show that the misunderstanding of a word or words may cause problems traceable to linguistic relativity (i.e., different people perceive a situation differently based on their understanding of a word or words). For example, Whorf discusses the case of the "empty gasoline drums" from his experience as a fire prevention inspector. Briefly, Whorf's story goes as follows: if gasoline drums are labelled "gasoline drums," people tend to behave with care around them, believing the gasoline within to be hazardous. However, if the drums are labelled "empty," people tend to behave carelessly around them, mistaking "empty" to mean that the potential for hazard is absent, and not realising that there may be highly explosive vapours remaining in the drums

(Whorf, 1941b, 135). This seems to be an example of the meaning of a word being dependent on the context in which it is used, for "empty" does not necessarily imply a complete lack of substance, but rather it may imply that the containers are only empty of what they are usually filled with. Thus in Whorf"s example the individuals are ignorant of which connotation (or "meaning") of the word "empty" applies in their situation.

The gasoline drum example should not be cited as evidence that Whorf's views are inconsistent over time, for immediately following his discussion of gasoline drums (and several other similar examples), Whorf makes an important clarification:

> The linguistic material in the above examples is limited to single words, phrases, and patterns of limited range. One cannot study the behavioural compulsiveness of such material without suspecting a much more far-reaching compulsion from large-scale patterning of grammatical categories, such as plurality, gender and similar classifications (animate, inanimate, etc.), tenses, voices and other verb forms, classifications of the type of "parts of speech," [...etc.]. (Whorf, 1941b, 137)

Furthermore, Whorf claims that it is because grammatical patterns are largely unknown to many people that their thoughts are so easily shaped by them. For instance, he says:

> ...the phenomena of a language [including grammar] are to its own speakers largely of a background character and so are outside the critical consciousness and control of the speaker... (Whorf, 1940c, 211)

Whorf believes that if people actually reflect upon the background systems of language (primarily the grammatical systems), they will become aware of the relationship between their language and their thoughts. Thus, people's thoughts and perceptions may not be so strictly bound by the rules of their language, once they are aware that they were bound in the first place. As

Whorf says:

> ...if a rule has absolutely no exceptions, it is not recognised as a rule or as anything else; it is then part of the background of experience of which we tend to remain unconscious. Never having experienced anything in contrast to it, we cannot isolate it and formulate it as a rule until we so enlarge our experience and expand our base of reference that we encounter an interruption of its regularity. (Whorf, 1940c, 209)

The above quotation is one of the keys to understanding that Whorf is not advocating the strong deterministic view of linguistic relativity. Whorf does, indeed, believe that people are capable of realising the influence that their language has on the way they interpret their surroundings, and thus to break free of that influence. In his essay "Languages and Logic," Whorf discusses what he calls the "mechanistic way of thinking" which he claims is ingrained in the grammatical structures of western Indo-European languages (Whorf, 1941a, 236). This "mechanistic way of thinking" is then reflected in the ways Indo-European language-users not only "construct propositions" but also "dissect nature and break up the flux of experience into objects and entities to construct propositions about" (Whorf, 1941a, 239). He says:

> To rid ourselves of this way of thinking is exceedingly difficult when we have no linguistic experience of any other [way of thinking]... (Whorf, 1941a, 238)

Therefore, Whorf concedes that it is difficult, but certainly not impossible, to transcend the cognitive limitations imposed by our original language.

One of the problems with society, and with Western society in particular, according to Whorf, is that people often refuse to acknowledge the narrow-mindedness of their perspectives (Whorf, 1942, 247-8). He says that:

> Every language and every well-knit technical sublanguage

> incorporates certain points of view and certain patterned resistances to widely divergent points of view. This is especially so if language is...as usual taken for granted, and the local, parochial species of it used by the individual thinker is taken to be its full sum [i.e. the full sum of points-of-view]. (Whorf, 1942, 247)

Thus, Whorf seems to believe that it is up to each of us to realise that our way of looking at the world may not be giving us as broad a picture as we could have, and that we should be open to new perspectives offered by people possibly very different from us.

Whorf maintains that linguists are in a particularly advantageous position to discover the influence of language on thoughts and perceptions, for he says:

> When linguists became able to examine critically and scientifically a large number of languages of wildly divergent patterns, their base of reference was expanded; they experienced an interruption of phenomena hitherto held universal, and a whole new order of significances came into their ken. (Whorf, 1940c, 212)

Presumably, these unnamed linguists (maybe even Whorf himself) were able to move beyond previous experiential limitations imposed by the patterns of their language. Unfortunately, Whorf does not provide any specific examples of what these linguists experienced differently. Nonetheless, the important point is that he believes people are capable of both: a) identifying the fact that the way they experience the world is limited by their language systems; and b) expanding their frames of reference by acquiring the perspectives inherent in other languages.

1.3 Whorf's Metaphysics

To understand Whorf's principle of linguistic relativity fully, one must understand its metaphysical aspects. I believe that Whorf's linguistic relativity theory embodies certain metaphysical concepts. The first concept concerns what Whorf refers to as a "metaphysics" (Whorf, 1950, 58) which means, for Whorf, the particular way a person perceives and cognitively categorises his or her experiences of the objective world, i.e., a person's world-view or "conceptual system" (Whorf, 1940c, 214). According to Whorf, a person's "metaphysics" is inextricably bound with his or her language patterns. Thus, the particular way different people have of looking at the world depends upon the language they speak. For example, in his discussion of the Hopi perception of time, Whorf declares that:

> ...the Hopi language and culture conceals a METAPHYSICS, such as our...view of space and time does...; yet it [the Hopi metaphysics] is a different metaphysics from [ours]..." (Whorf, 1950, 58, capitals in the original.)

Elsewhere, Whorf states:

> When Semitic, Chinese, Tibetan, or African languages are contrasted with our own, the divergence in analysis of the world becomes more apparent; and when we bring in the native languages of the Americas..., the fact that languages dissect nature in many ways becomes patent. The relativity of all conceptual systems, ours included, and their dependence upon language stand revealed. (Whorf, 1940c, 214)

Whorf is clearly claiming that differences in world-view automatically follow from the language a person speaks, for they occur together.

That a people's world-view (or "metaphysics") is dependent on their language is an assumed truth, for Whorf. Thus, Whorf's theory is not an hypothesis in the strictly scientific sense, for Whorf is not positing an hypothesis to be shown true or false by empirical measures. Instead, Whorf is positing what he calls a "principle" which, for Whorf, consists of philosophical *a priori* truths about the relationship between language and "metaphysics." Whorf assumes from the outset that the language we speak significantly influences the way we view the objective world–thus linguistic relativity is presupposed. In essence, Whorf's linguistic relativity is *epistemological*, for it is people's *knowledge* about the world that is relative depending on their language(s). Furthermore, the examples Whorf gives about the differences between the ways people of different languages categorise experiences, etc., are not meant to be *proof* supporting an empirical claim, rather, they are meant to *display* what Whorf takes to be some of the perspectives available to various language speakers, to give his readers an appreciation of the range of options open to different languages.

1.4 Metaphysical Hierarchies

The other feature of Whorf's metaphysical claims concerns what I call "Metaphysical Hierarchies." Whorf does not use this term, but I believe that it embodies the ideas he is presenting. As I have mentioned previously, Whorf is notorious for not stating his ideas in a clear and precise manner. As a result, my overall interpretation is based on a compilation of statements Whorf makes throughout his works. I have endeavoured to construct a coherent theory which combines Whorf's sometimes ambiguous statements into a more tangible product. Thus, the following section is highly interpretive, but hopefully captures the essence of Whorf's thought.

According to my interpretation of Whorf's theory, each language pattern's metaphysics has a hierarchical structure. Furthermore, there is an Ultimate Metaphysical Hierarchy in which exist all the smaller Metaphysical Hierarchies based on individual languages; i.e. the the "metaphysics" or world-views inherent in each language are a subset of the totality of world-view. For Whorf, each language has its own "metaphysics," and thus its speakers, in a sense, exist within their own Metaphysical Hierarchy, but they are also a part of the one Ultimate world, and are capable of learning more about the Ultimate world when they overcome the limitations of their original "metaphysics."

I interpret Whorf as claiming that the perspectives on the world obtainable through each language exist within a hierarchical framework. Whorf says that:

> ..the cosmic picture has a serial or hierarchical character, that of a progression of planes or levels. (Whorf, 1942, 248)

According to my interpretation, at the lower levels, people are the least enlightened about the world, including how their language operates and relates to their thoughts. At this stage, people will have the narrowest world-view. As I interpret them, the Hierarchies are rather like *inverse pyramids* of understanding and perspectives, for the lower levels are very narrow and do not encompass broad perspectives, but as one ascends in the Hierarchies (both their own language Hierarchies as well as the Ultimate Hierarchy), the available perspectives broaden, and people see more aspects of reality. I think that Whorf would say that as people learn more about the structure of their own language, and how it imposes a certain structure on their thoughts and perceptions, they move higher up both in their individual Metaphysical Hierarchies as well as in the Ultimate Metaphysical Hierarchy.

Whorf claims that each different language, with its own unique structure, enables its users to think and to perceive only in certain ways, for as I quoted earlier, he says:

> Every language and every well-knit technical sublanguage incorporates certain points of view and certain patterned resistances to widely divergent points of view. (Whorf, 1942, 247)

In a statement aimed at the sciences, but which certainly could be applicable to different languages in general, Whorf says:

> Lacking recognition of [the] serial [or hierarchical] order [of the world], different sciences chop up segments, as it were, out of the world, segments which perhaps cut across the direction of the natural levels, or stop short when, upon reaching a major change of level, the phenomena become of quite different type, or pass out of the ken of the older observational methods. (Whorf, 1942, 248)

Therefore, it can be interpreted that at the lower levels in the Ultimate Metaphysical Hierarchy, there are areas of separation between different languages; one language community will have quite different perspectives upon the world from another language community with significantly different language patterns. As well, at levels within individual-language Hierarchies there may be separation based on, perhaps, scientific sub-languages, although presumably the differences would not be as significant between two English sub-languages as between English and a non-European language. Some of the things Whorf claims to differ across languages are perceptions of "vibratile phenomena" such as wave processes and vibrations (Whorf, 1936, 55), and the perception of time (Whorf, 1950, 57).

For Whorf, linguistic relativity is apparent in the different ways that people interpret their experiences of things and events in the objective world, corresponding to the ways their grammatical system categorises those same things and events. However, there is also presumably some cross-over (i.e., some underlying constancies regardless of language), in which people from different language systems grasp certain aspects of the world in the same way. For example, Whorf says:

> ...visual perception is basically the same for all normal persons past infancy and conforms to definite laws.... If the perceptual

> influences are such as to cause one normal person to see a definite outline [e.g.], they will cause all other normal persons to see the same outline. (Whorf, 1940a, 163-164.)

Nonetheless, Whorf would claim that there are aspects of the objective world unknowable to some people while they are confined to the lower levels in the hierarchy, and/or within the narrow frame of reference of a single language, for at that point their perspectives are narrow, preventing them from making certain observations about the world.

As mentioned in §1.2, Whorf believes that it is possible for people to transcend their narrow perspectives, for he says:

> Linguistic knowledge entails understanding many different... systems of logical analysis. Through it, the world as seen from the diverse viewpoints of other social groups, that we have thought of as alien, becomes intelligible in new terms. Alienness turns into a new and often clarifying way of looking at things. (Whorf, 1942, 264)

One might conjecture that in Whorf's theory, if people were to acquire the perspectives of all possible languages, then all of ultimate reality would be accessible to them.

At the higher levels (or perhaps the highest level) in Whorf's Ultimate Metaphysical Hierarchy, he seems to envision a sort of utopia. He says:

> ...through a wider understanding of language than western Indo-European alone can give...is achieved a great phase of human brotherhood.... It causes us to transcend the boundaries of local cultures, nationalities, physical peculiarities dubbed "race," and to find that in their linguistic systems, though these systems differ widely, yet in the order, harmony, and beauty of the systems, and in their respective subtleties and penetrating analysis of reality, all men are equal. (Whorf, 1942, 263)

Indeed, it seems as though Whorf is not advocating the acquisition of greater linguistic knowledge merely for the sake of knowledge about reality, although that, too, is important for him. Rather, Whorf believes that such an acquisition will provide people with a greater knowledge and understanding of one another, hopefully leading to a more tolerant world in which all people are united.

1.5 The Role of Culture in Whorf's Views

In Whorf's utopian vision for humanity, there is the suggestion that by learning diverse languages people will learn about each other. This can be explained by the fact that culture plays a very important role in Whorf's theory. Whorf believes that language is formed and evolves along with a culture. Thus, by learning and understanding a language people will also learn something about the culture in which the language is spoken. Furthermore, the impact a language has on the way we interpret the objective world will include cultural norms that have permeated the language, for Whorf believes that a language and a culture are intertwined. In his essay, "The Relation of Habitual Thought and Behaviour to Language," Whorf specifically addresses the question of connections between language and culture. He says that one of the aims of his essay is to answer the following question:

> Are there traceable affinities between (a) cultural and behavioural norms and (b) large-scale linguistic patterns? (Whorf, 1941b, 138).

By the end of his essay, he reports as follows:

> There are connections but not correlations or diagnostic correspondences between cultural norms and linguistic patterns... There are cases where the "fashions of speaking" are closely integrated with the whole general culture, whether or not this be universally true, and there are connections within this integration, between the kind of linguistic analyses employed and various behavioural reactions and also the shapes taken by various cultural developments... These connections are to be found not so much by focusing attention on the typical rubrics of linguistic,

> ethnographic, or sociological description as by *examining the culture and language (always and only when the two have been together historically for a considerable time) as a whole* in which concatenations that run across these departmental lines may be expected to exist, and, if they do exist, eventually to be discoverable by study. (Whorf, 1941b, 159, my emphasis.)

There is nothing in Whorf's discussion in the above passage to suggest that there is a one-way influence, from language to culture or vice versa; rather, he seems to be suggesting that linguistic and cultural practices develop together. Indeed, in that same essay he says:

> Which was first: the language patterns or the cultural norms? In main they have grown up together, constantly influencing each other. (Whorf, 1941b, 156)

Whorf also refers to the "SAE [Standard Average European] language-culture complex," the growth of which he claims dates back to "ancient times," again indicating that he believes that linguistic and cultural practices develop together, each influencing the other (Whorf, 1941b, 156).

Statements from Whorf's essay, "An American Indian Model of the Universe," also seem to suggest that he views language and culture as intertwined. For example, in his discussion about how a metaphysics is inherent in a language, Whorf says:

> ...the Hopi *language and culture* conceals a METAPHYSICS... (Whorf, 1950, 58, my emphasis, capitals in the original.)
>
> The metaphysics underlying our own *language...and modern culture* ...imposes upon the universe two grand COSMIC FORMS, space and time... (Whorf, 1950, 59, my emphasis, capitals in the original.)

His concatenating of "language and culture" seems to indicate that there is an extremely close, if not inseparable, relationship between the two.

In his essay, "A Linguistic Consideration of Thinking in Primitive Communities," Whorf makes the comment that:

> ...the problem of thought and thinking...is not purely and simply a psychological problem. It is quite largely cultural. It is moreover largely a matter of one especially cohesive aggregate of cultural phenomena that we call a language. (Whorf, 1956, 65)

Again, Whorf seems to be inseparably tying language and culture together. He is also again stating his position that our thoughts are influenced by our language (and culture).

1.6 Realism vs. Anti-realism

Some may ask whether Whorf is a realist or an anti-realist. An intuitive definition of realism is that the existence and properties of things in the world are independent of what people make of them and how people perceive them; the truth or falsity of statements about objects depends on those objects themselves, and not on the people perceiving them. Anti-realism denies that properties of things (or perhaps even the existence of things themselves) are independent of how we perceive them, thus the truth or falsity of statements about things in the world is dependent on our minds, i.e., on how we perceive them.

Based on the above descriptions, Whorf is a realist. By calling his theory "linguistic relativism" Whorf may mislead people into believing that he advocates the antirealist thesis that a people's language provides them with a view of one world, while another language provides its people with a view of a different world. For Whorf, linguistic relativity is essentially *epistemological*, for different languages merely provide different perspectives on one and the same world–one and the same reality–thus it is the *knowledge* of different language speakers that is relative. Recall my analogy in the Introduction that different languages enable us to "see" the world in different ways rather like wearing glasses with different lenses enables us to see the world differently; in both cases, the world stays the same, it is peoples' perceptions of their experiences that differ.

To illustrate the idea that Whorf believes there to be only one objective reality which people of different languages see from different perspectives, I turn to a statement he makes about non-English speakers bringing unique observational experiences to science:

> To exclude the evidence which [other] languages offer as to what the human mind can do is like expecting botanists to study nothing but food plants and hothouse roses and then tell us what the plant world is like! (Whorf, 1940c, 215)

The above quotation and its analogy makes it clear that Whorf believes that people see different aspects, or segments, of one reality depending on the language they speak. Just as roses and food plants make up but a fraction of the plant world, so does an individual language-based metaphysics make up a fraction of the perspectives on the whole of reality. Another passage, in which Whorf discusses the narrow-mindedness of Western science, illustrates the same point without relying upon analogy:

> ...certain linguistic patterns rigidified in the dialects of the sciences–often also embedded in the matrix of European culture form which those sciences have sprung, and long worshipped as pure Reason *per se*–have been worked to death. Even science senses that they are somehow *out of focus for observing what may be significant aspects of reality*, upon the due observation of which all further progress in understanding the universe may hinge. (Whorf, 1942, 247, my emphasis.)

I believe that Whorf wants people, and especially scientists, to stop taking for granted the system underlying their culture, thought, and behaviour, as though that system is the one true conduit to understanding, for he says:

> One significant contribution to science from the linguistic point of view may be the greater development of our sense of perspective. We shall no longer be able to see a few recent dialects of the Indo-European family, and the rationalising techniques elaborated from their patterns, as the apex of the evolution of the human mind....

> They, and our own thought processes with them, can no longer be envisioned as spanning the gamut of reason and knowledge but only as one constellation in a galactic expanse. (Whorf, 1940c, 218)

Indeed, Whorf would say that people should be open-minded enough to consider the possibility of other ways of looking at things, and in so doing, they will acquire broader perspectives–and broader knowledge–upon all the world.

For Whorf, the things in the objective world are very much independent of our minds; what is dependent on our minds, and on the languages we use, is the perspective upon, or the piece of, the whole of reality that we perceive. Thus, the more languages we can learn, the more perspectives we can acquire upon the whole.

1.7 How Aspects of the "Weak" and the "Strong" Hypotheses Fit Into One Theory

Within the concept of Metaphysical Hierarchies, there are different degrees of linguistic relativity, i.e., different degrees of how much our particular language systems influence our world-view. At the lowest level, people's thoughts about the objective world may be completely influenced by and dependent upon their language system, but this influence may gradually weaken as people become more aware, through intuition and/or education, that they are operating within a limited framework. Therefore, with regards to the so-called "weak" and "strong" versions of Whorfianism to which many commentators refer, I reply that *aspects* of both forms are compatible within Whorf's conceptual Metaphysical framework. A stronger form holds for those people still in the lower levels of the Metaphysical Hierarchy, for they have not yet become aware that their world-view is influenced by their language system, and that other possible perspectives exist. This does not precisely reflect the "strong hypothesis" previously mentioned, for that implies an inescapable determinism in which people cannot break free of the "metaphysics" imposed by their language, and Whorf does not advocate such an idea. A weaker form holds for those higher in the Metaphysical Hierarchy, for their world-view is not exclusively influenced by their native language. The patterns inherent in the other languages people learn, and the world perspectives that go with them, create a broader picture of reality for those at the higher levels in the Hierarchy.

1.8 Language and Thought Processes

It seems that, in Whorf's theory, some form of linguistic influence on our thought processes always persists, for he believes language systems to provide the primary means by which we think about and perceive the objective world. Even if one were to assimilate every language system, and be able to think about and perceive the world from every possible perspective (if this is, indeed, possible), it is as a result of the multitude of linguistic systems held by the individual. Such an individual's thoughts and perceptions will thus be influenced by all language systems, each providing certain perspectives, together making up a fuller picture of reality. For Whorf, people initially experience only that part of reality which their language systems allow, but they can acquire new perspectives upon the world if they try, by acquiring the knowledge and perspectives of other languages. The first steps to achieving such new perspectives perhaps may be set in motion due to intuitive insight, in which a person realises *a priori* that they may be operating within a certain linguistic framework, thus being encouraged to move beyond its boundaries. Alternatively, people may take the first steps after encountering others with different perspectives, and thus realising that their perspectives are narrow.

Although Whorf suggests that the way people cognitively experience the objective world is largely a matter of what language(s) they know, he does maintain that there are thought processes that do not rely upon language. Consider the following passage:

> ...the tremendous importance of language cannot, in my opinion, be taken to mean that nothing is back of it of the nature of what has traditionally been called 'mind.' My own studies suggest, to me, that language, for all its kingly role, is in some sense a superficial embroidery upon deeper processes of consciousness, which are necessary before any communication, signalling, or symbolism whatsoever ever can occur... (Whorf, 1941a, 239).

It seems quite evident that Whorf is indicating the existence of mental processes underlying language, and indeed, as he says, necessary for there to be language in the first place. Thus, Whorf is not positing the notion that *all* cognitive processes fall into the parameters of a language, but perhaps only those responsible for the "classification and arrangement of the stream of sensory experience which results in a certain world order" (Whorf, 1936, 55).

1.9 Closing Remarks

In my preceding analysis of Whorf, I made several main points which I shall hereby summarise as my "Principles of Interpretation":

Principle of Interpretation #1: Whorf is Complex: To try to provide a brief definition for Whorf's theory, or to take any particular statement of Whorf's in isolation as being supposedly representative of his overall views, is likely to miss key elements of his theory, and thus to misrepresent Whorf.

(See §1.1.)

Principle of Interpretation #2: One Theory: Whorf holds only one theory of linguistic relativity which consists of variations in degree; he does not hold two different theories commonly referred to by commentators as the "weak Whorfian hypothesis" and the "strong Whorfian hypothesis." (See §1.1, 1.7.)

Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity: Whorf's theory is a philosophical, non-empirical thesis which assumes as an *a priori* truth that each language embodies its own "metaphysics," i.e., the particular way a person perceives and cognitively categorises his or her experiences of the objective world (i.e., a person's world-view). (See §1.3.)

Principle of Interpretation #4: Metaphysical Hierarchies: Whorf's theory embodies the concept of Metaphysical Hierarchies, the different levels of which represent the narrower or broader perspectives people have upon the world based upon their linguistic knowledge. (See §1.4)

Principle of Interpretation #5: Whorf is a Realist about the World: Whorf is a realist who believes that all people experience (or "see") one and the same reality; his notion of relativity only concerns the different *aspects* of that reality that people experience (or "see") based upon the language(s) they know. Thus, for Whorf, linguistic relativity is essentially *epistemological*, for it is people's *knowledge* about the world that is relative depending on their language(s). (See §1.6)

I will refer back to these Principles of Interpretation, and in some cases explain them more fully, in the following chapters.

Chapter 2

Misconceptions and Objections

In this chapter, I shall examine what I interpret to be some of the general misconceptions about Whorf. I shall also discuss and assess particular objections to Whorf's theory, citing examples both from Whorf and from some sympathetic commentators as to why I agree or disagree with the objections. A recent essay by M. Keinpointner (1996) provides a typical and systematised critique of Whorf, and so it shall be the primary focus of my concentration.

2.1 Missing the Big Picture

Before I address specific objections to Whorf, a general criticism I have is that commentaries about Whorf often miss what I like to call the "big picture" underlying his theory. For a typical example, Keinpointner's essay tries to set out Whorf's position by quoting a couple of passages from Whorf as though they were a complete description of Whorf's theory. Keinpointner does not attempt to explain the broader context in which the passages appear, thus, I believe, he misses the "big picture." The first quotation he provides is one of Whorf's most quoted statements, from "Science and Linguistics," in which Whorf describes his:

> ...principle of relativity, which holds that all observers are not led by the same physical evidence to the same picture of the universe, unless their linguistic backgrounds are similar, or can in some way be calibrated. (Whorf, 1940c, 214)

I myself use this quotation to set out *some* of the premises of Whorf's theory, but I would certainly endeavour to explain it in the broader context of Whorf's complex and multi-faceted theory. Keinpointner then quotes from

Whorf's essay "Linguistics as an Exact Science," in which Whorf refers again to a "linguistic relativity principle," explaining that language patterns are generally background phenomena of which most people are unaware, and that:

> ...users of markedly different grammars are pointed by their grammars toward different types of observations and different evaluations of externally similar acts of observation, and hence are not equivalent as observers but must arrive at somewhat different views of the world. (Whorf, 1940b, 221)

Keinpointner seems to take the above quotes from Whorf as being concise statements of Whorf's theory, and as a preface to his subsequent discussion, he says, "[t]hese remarks can be challenged by a number of critical objections" (Keinpointner, 477). However, I believe that to use those passages alone results in an all-too-cursory interpretation of Whorf. In fact, as I noted in my "Principle of Interpretation # 1: Whorf is Complex" (see also §1.1), to take any particular statements of Whorf's in isolation is likely to miss important elements of his thought, and thus to misrepresent Whorf's overall theory. Unfortunately for Whorf, it can be much easier to criticise or to dismiss his "theory" if only certain aspects of it are presented as evidence of the supposed whole.

2.2 The "Strong" vs. "Weak" Hypothesis Error

One extremely common (mis)interpretation of Whorf, which is sometimes also used as a specific criticism against him, is the notion that he posited two "hypotheses," a "strong" and a "weak" version. I briefly discussed the "strong" and "weak" hypothesis issue in the last chapter, and formulated my corresponding "Principle of Interpretation #2: One Theory" (see also §1.1, 1.7). I shall now examine in more detail some of the things that are said on this issue.

It is often assumed that Whorf had two different, and possibly incommensurable, theories of linguistic relativity. In Keinpointner's essay, after he has presented some supposedly "critical objections" to his interpretation of Whorf's linguistic relativity principle (which shall be discussed in the following sections), he softens his tone, but he adopts the notion that Whorf has two different theories of linguistic relativity. For example, Keinpointner says that:

> To do justice to Whorf's impressive theoretical and descriptive achievements, I hasten to add that [Whorf] has also formulated less radical versions of the LRP [linguistic relativity principle], which are much easier to defend. (Keinpointner, 480)

He then provides the following quotations from Whorf meant to demonstrate a supposedly more palatable, less deterministic, version of linguistic relativity:

> ...probably the apprehension of space is given in substantially the same form by experience irrespective of language. (Whorf, 1941b, 158)
>
> ...language, for all its kingly role, is in some sense a superficial embroidery upon deeper processes of consciousness. (Whorf, 1941a, 239)
>
> There are connections but not correlations or diagnostic correspondences between cultural norms and linguistic patterns. (Whorf, 1941b, 159)

However, for Keinpointner to take a particular set of Whorf's quotations in isolation and out of context as being representative of a theory of "weak" linguistic relativity is equally as misleading as his previous attempt to isolate some of Whorf's statements as being representative of a less-defensible, and more deterministic, theory of "strong" linguistic relativity.

In my interpretation, Whorf has one theory, one principle of linguistic relativity, which contains different degrees of relativity within itself. Based upon my "Principle of Interpretation #4: Metaphysical Hierarchies" (see also §1.4), Whorf's linguistic relativity principle operates within a hierarchical framework, thus at certain points there are greater instances of relativity across different languages than at other points. It is completely misleading, and I think wrong, to suggest that Whorf has two theories, and especially to present Whorf as positing two incommensurable views, one of which is almost always claimed to be patently false, while the other is claimed to be painfully obvious. In fact, Keinpointner claims that his critical examination of Whorf's "linguistic relativity principle" has:

> ...led to its rejection. Instead of being a 'cognitive cage,' language would seem to be an 'infinitely expansible net' which always surrounds us, but can at the same time be infinitely expanded in any direction. (Keinpointner, 480)

However, Keinpointner concedes that to interpret Whorf in the above way is to trivialise Whorf's theory, for "nobody doubts that language has some moderate influence on our thinking processes" (Keinpointner, 480). In all of what he says, Keinpointner misses the "big picture," for he does not grasp the fact that Whorf's theory is a complex and philosophical thesis in which language and "metaphysics" are inseparably bound in a hierarchical structure which allows for differing degrees of linguistic relativity (note my "Principles of Interpretation #1,2,3 and 4").

Further demonstrating the misconception that Whorf held two theories, a book by Julia Penn (1972) contains a section entitled "The Two Whorf Hypotheses." In it, she says the following:

> [The Whorf hypothesis] is stated more and less strongly in different places in...Whorf's writings.... The first difficulty is in deciding just what "the" Whorf hypothesis is. Is it "language determines thought," an extreme hypothesis indeed? Or is it "language influences thought," a much milder assertion, and one

> which can never be disproven as long as some influence of a given language on some non-linguistic behaviour of its speakers can be demonstrated. (Penn, 13)

Penn, like Keinpointner, chooses to interpret Whorf as positing two different theories instead of trying to reconcile Whorf's various remarks into one coherent theory, as I have tried to do (note my "Principle of Interpretation #2: One Theory," and §1.1, 1.7). She cites the following quotation from Whorf which she claims exemplifies his stronger deterministic theory of linguistic relativity (Penn, 29):

> ...the forms of a person's thoughts are controlled by inexorable laws of pattern of which he is unconscious. These patterns are the unperceived intricate systematisations of his own language–shown readily enough by a candid comparison and contrast with other languages, especially those of a different linguistic family. His thinking itself is in a language–in English, in Sanskrit, in Chinese. (Whorf, 1942, 252)

Indeed, the above quotation is a fairly strong statement of linguistic relativity, but as my "Principle of Interpretation #4: Metaphysical Hierarchies" explains, at the lower levels in the Hierarchy, such a description as in the above quote is quite fitting, for at that point people are still unconscious of the fact that the patterns of their language influence the way they think about and perceive the objective world (see also §1.4).

Penn then provides the following quote from Whorf (Penn, 29):

> ...we cut up and organise the spread and flow of events as we do *largely* because, through our mother tongue, we are parties to an agreement to do so, not because nature itself is segmented in exactly that way for all to see. (Whorf, 1941a, 240, my emphasis)

She maintains that the above quote indicates that Whorf also holds a weaker linguistic relativity theory, due to his use of the qualifying "largely."

It apparently does not occur to some commentators that Whorf may have held commensurable views similar (but *not* identical) to those of a strong and a weak version as parts of one theory which allows for differing degrees of linguistic relativity (note my "Principle of Interpretation #2: One Theory" and see also §1.1, 1.7). Instead, they interpret Whorf as holding two possibly contradictory views–contradictory because a strong linguistic *determinism* is not compatible with a weaker linguistic relativity. A strong linguistic "determinism" seems to presuppose that all of our thoughts are determined by our language, and that we can never break free of that bond (Whorf does *not* hold this position). The weaker version of linguistic relativity presupposes that only some of our thoughts are influenced by our language and that the influence is breakable.

Penn notes that, if one were to assume that Whorf was positing the weaker hypothesis, then an example such as Whorf's empty gasoline drums seems indeed to support such an hypothesis (namely, that a language in some way influences the behaviour of its users) (Penn, 31). The supposed strong, deterministic hypothesis, on the other hand, says Penn, is without empirical support, and she claims that Whorf could only have held such a position "on the strength of [his] own feelings that the assertions were true rather than on the strength of compelling evidence" (Penn, 32). In some sense, Penn is correct in her latter statement, although she may not know why (but she is wrong to suggest that Whorf posited a notion of linguistic *determinism*). As noted in my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity" (see also §1.3), Whorf's theory is, to some extent, an *a priori* philosophical theory, many aspects of which Whorf would agree cannot be proven empirically; thus he simply seems to believe that his theory is true, in a large part on the basis of his own reflections on the issues involved.

Penn argues that the strong, deterministic hypothesis is "untenable not only on empirical grounds..., but on philosophical grounds as well" (Penn, 18). She explains:

> The proponent of the extreme hypothesis that language determines thought must be prepared to accept the logical consequences of his position, i.e. that there is no prelinguistic thought in the individual and that human thought was not originally responsible for the creation of language. (Penn, 18)

She also claims that "Whorf considers language and thought to be identical" (Penn, 30). However, as I mentioned in §1.8, Whorf claims that there must be some mental processes which precede language, and that operate independently of language, for he says:

> ...the tremendous importance of language cannot, in my opinion, be taken to mean that nothing is back of it of the nature of what has traditionally been called 'mind.' My own studies suggest, to me, that language, for all its kingly role, is in some sense a superficial embroidery upon deeper processes of consciousness, which are necessary before any communication, signalling, or symbolism whatsoever ever can occur... (Whorf, 1941a, 239)

Thus, it is simply wrong to suggest that Whorf advocates the idea that there is no prelinguistic thought or that thought and language are identical.

I have hopefully shown that Whorf does not hold the position of "linguistic *determinism*" as defined by his commentators, but neither does he merely hold the so-called weak position. Despite her reservations about Whorf's stronger statements, and her rejection of a "strong" deterministic hypothesis, Penn claims that she believes the so-called "weak" linguistic relativity hypothesis to be probably true. She cites studies which convince her that there is clear evidence for the notion that language influences thought to some degree (Penn, 38). However, neither the "weak" nor the "strong" position (nor both, as defined by Penn and others) describes adequately or correctly the complex theory that Whorf lays out throughout the pages of his writings.

Another commentator, Robert H. Robins, notes that discussions of Whorf have yielded two different hypotheses, one strong, the other weak, called "linguistic determinism" and "linguistic relativity" respectively, and which conform to the definitions cited from Penn (above) (Robins, 100). He quotes the following passages from Whorf's work which supposedly express and support "linguistic determinism" (Robins, 101-102):

> We cut nature up, organise it into concepts, and ascribe significances as we do, largely because we are parties to an agreement to organise it in this way–an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, and implicit and unstated one, *but its terms are absolutely obligatory*; we cannot talk at all except by subscribing to the organisation and classification of data which the agreement decrees. (Whorf, 1940c, 213-214, emphasis in the original)
>
> Segmentation of nature is an aspect of grammar. (Whorf, 1941a, 240)
>
> Every language is a vast pattern-system, different from others, in which are culturally ordained the forms and categories by which the personality not only communicates, but also analyses nature, notices or neglects types of relationship and phenomena, channels his reasoning, and builds the house of his consciousness. (Whorf, 1942, 252)

As I discussed with regards to Penn's observations, some of Whorf's statements (like those above) may seem to reflect a fairly strong notion of linguistic relativity. However, according to my "Principle of Interpretation #4: Metaphysical Hierarchies," such statements are certainly compatible within Whorf's overall theory. At the lower levels in the Metaphysical Hierarchy, the ways people "cut nature up, organise it into concepts, and ascribe significances" to it may be completely influenced by and dependent upon their native language, for at that point they may be ignorant about the power language has to affect their thoughts.

Lacking my interpretation of Whorf and instead believing Whorf to hold two theories of linguistic relativity, Robins remarks that:

> Certainly the strong form of the hypothesis appears to be unacceptable. On a priori grounds one can contest it by asking how, if we are unable to organize our thinking beyond the limits set by our native language, we could ever become aware of these limits. Empirically the admitted possibility of translation between languages of diverse structures spoken by people of different cultures is scarcely compatible with total linguistic determinism... (Robins, 101)

However, it is incorrect to claim that Whorf held the view of "total linguistic determinism," because he claims that people can, indeed, become aware of the limits of their language, and even transcend them (note especially my discussions in §1.2, 1.4, and 1.8).

After claiming the falseness of the strong thesis of "linguistic *determinism*," Robins says that the "admitted difficulties involved in translation afford solid support for the validity of ["weak"] linguistic *relativity*" (Robins, 101, my emphasis). He then cites the following passages from Whorf supposedly supporting this weaker hypothesis (Robins, 102):

> [There are] system[s] of thought in which categories different from our tenses are natural. (Whorf, 1941b, 159, square brackets mine.)
>
> Indo-European tongues...give structural priority [to subject-predicate type sentences].... To rid ourselves of this way of thinking is exceedingly difficult [but not impossible]. (Whorf, 1941a, 237-238, square brackets supplied by Robins.)
>
> Newtonian space, time, and matter are no intuitions. They are recepts from culture and language. That is where Newton got them. (Whorf, 1941b, 153)

I believe that this is simply an incorrect way to go about analysing Whorf, for it is misleading to take one set of Whorf's quotations in isolation as supposedly being representative of one theory, and then to take another set of quotations (often from the very same work) as supposedly being representative of a different theory (note my "Principle of Interpretation # 1: Whorf is Complex," and see §1.1).

Like Keinpointner and Penn, Robins points out how the so-called "strong linguistic determinism hypothesis" is impossible to support, but he favours and even accepts the so-called "weak linguistic relativity hypothesis." He does not view the weaker hypothesis as trivial, for he says:

> The weaker interpretation, linguistic relativity, while being much more readily acceptable than the stronger, does not rob Whorf's ideas and insights of their significance in interdisciplinary studies of communication and cognition... (Robins, 102)

In particular, Robins maintains that Whorf's idea that some language structures "make certain conceptualisations easier or more natural, though not, of course, obligatory" can, and perhaps should, be applied to ongoing studies (Robins, 104). Thus, Robins believes that there is merit to be found in Whorf's work, despite his incorrect interpretation of Whorf's theory.

Jane H. Hill is another commentator who notes that two forms of a "Whorf hypothesis" have been adopted by scholars, one being a "strong linguistic determinism" and the other a "weaker linguistic relativity" (Hill, 15). She defines "linguistic determinism" as an hypothesis that:

> ...proposes that the forms of language are prior to and determinative of the forms of knowledge and understanding. That is, human beings could not imagine a kind of knowledge which was not encoded in their language. (Hill, 15)

"Linguistic relativity," on the other hand, she says:

> ...suggests that there are no *a priori* constraints on the meanings which a human language might encode, and these encodings will

> shape unreflective understanding by speakers of a language. (Hill, 15)

Hill remarks, corresponding to my discussion above, that "linguistic determinism" has been "largely discredited" due to its almost obvious falseness (Hill, 16). As a result, she says that research has focussed on testing "the second type of Whorfianism, the claim for a linguistic relativity," which includes "the hypothesis that human languages are highly variable, and that this variability will be reflected in nonlinguistic knowledge and behaviour" (Hill, 16). Echoing my views, Hill claims that the strong form of "linguistic *determinism*" is certainly not supported in the works of Whorf. She maintains that Whorf merely provides "an occasional burst of hyperbole" in his writing, and she says:

> ...statements in Whorf's writings which might be read as implying a linguistic determinism are contradicted by his own interpretive method, aimed at the discovery and comparison of patterning in a variety of languages. (Hill, 15)

Again, lacking my interpretation of Whorf's Metaphysical Hierarchies, Hill does not acknowledge that Whorf's stronger, *seemingly* deterministic statements reflect the state of affairs in the lower levels of the Hierarchy, at which point people's perspectives upon the objective world are bound by the limitations of their language. Hill simply seems to believe that Whorf posited the "weak linguistic relativity" hypothesis, which is an inaccurate interpretation of Whorf.

I believe that those who cannot reconcile Whorf's statements reflecting weaker and stronger degrees of linguistic influence are overlooking Whorf's bigger picture of the hierarchical structure of reality, in which one can rise above the bonds of the lower levels imposed by their native language, and thus go from a condition of greater influence from and dependency upon their native language to one of lesser influence from and dependency upon their native language. Of course, one can simply deny the whole idea of different levels or planes of reality, but then one is no longer arguing about Whorf's theory but about something else.

To say that Whorf advocates both a mild linguistic relativism *and* a radical determinism is to misrepresent Whorf, for it sounds as though he presents two theories, not just one. As I have discussed, Whorf is not claiming any sort of strict *determinism*, as defined by various commentators, for that would rule out the possibility of going beyond the boundaries of one's native language (a possibility he posits). It may be easier to explain a mild relativity hypothesis, and to find empirical data which seems to validate it, but this is to ignore crucial elements of Whorf's theory. Whorf's ideas should not be watered down by those who simply refuse to accept the more extreme aspects of his theory. Unfortunately, any position which relies upon theorising about human thought, such as Whorf's theory, is not easily provable; for we do not know with utter certainty how we think, nor can we know with certainty that any one person's thoughts differ from another's, or that perspectives vary among different people. However, that does not mean that we must completely disregard such theories, nor that we cannot learn something from them. To reject Whorf's theory on the grounds that it cannot be verified by scientific procedures is to ignore the fact that Whorf was arguing for a more highly theoretical position.

2.3 The Objections

In this section, I will address particular objections to Whorf's theory. Much of my discussion will be based on the framework of a recent essay by Keinpointner which presents several objections to Whorf's ideas. My purpose in using Keinpointner's essay is twofold: first, it is a recent essay which systematically sets out the typical objections to Whorf; and second, it exemplifies the fact that current writers continue to address the issues put forth by Whorf, and indeed they continue to address Whorf himself. If Whorf is as irrelevant as some writers try to claim, then it seems somewhat contradictory that even Whorf's critics continue to discuss his work. The fact that they do is an indication that there may be some merit–at least some food for thought–in what Whorf discussed many years ago.

2.3.1 Objection #1: "If Whorf was right about linguistic relativity, then he could not have discovered its existence"

The first objection I shall examine rests on the premise that Whorf's theory is self-refuting. As Keinpointner puts it: if Whorf's linguistic relativity principle claims that language is like "a cage in which our thinking is imprisoned," then Whorf could not have discovered the "total dependence of thought on language" (Keinpointner, 477). Keinpointner claims that this objection shows that Whorf's "principle of linguistic relativity" is a paradox, and thus incoherent.

Keinpointner ought to have recognised that to interpret Whorf's theory in such a simplistically deterministic way is incorrect. According to my interpretation, Whorf's "principle of linguistic relativity" is a complex theory which involves differing levels of awareness about the relationship between language and cognition. As I discussed in §1.2, there are several passages in Whorf's work which indicate that people certainly are capable of discovering the fact that their thoughts, including their world view, are influenced by their languages. For example, in his discussion about how the rules of our grammar influence the way we think about things in the world, Whorf says:

> ...if a rule has absolutely no exceptions, it is not recognised as a rule or as anything else; it is then part of the background of experience of which we tend to remain unconscious. Never having experienced anything in contrast to it, we cannot isolate it and formulate it as a rule until we so enlarge our experience and expand our base of reference that we encounter an interruption of its regularity. (Whorf, 1940c, 209)

Elsewhere he says,

> To rid ourselves of this way of thinking is exceedingly difficult when we have no linguistic experience of any other [way of thinking]... (Whorf, 1941a, 238)

Finally, Whorf notes that:

> Linguistic knowledge entails understanding many different... systems of logical analysis. Through it, the world as seen from the diverse viewpoints of other social groups, that we have thought of as alien, becomes intelligible in new terms. Alienness turns into a new and often clarifying way of looking at things. (Whorf, 1942, 264)

Therefore, Whorf certainly does not claim that our language is like "a cage in which our thinking is imprisoned."

Furthermore, in my interpretation, it is simply incorrect to say that Whorf believes there to be a "total dependence of thought on language," for as I noted in §1.8, Whorf says that:

> ...the tremendous importance of language cannot, in my opinion, be taken to mean that nothing is back of it of the nature of what has traditionally been called 'mind.' My own studies suggest, to me, that language, for all its kingly role, is in some sense a superficial embroidery upon deeper processes of consciousness, which are necessary before any communication, signalling, or symbolism whatsoever ever can occur... (Whorf, 1941a, 239).

I interpret the above passage as an indication that Whorf believes there to be aspects of thought that do not depend upon one's language. Furthermore, the aspects of thought with which Whorf always discusses as being influenced by language concern the ways people cut up and organise their experiences of the objective world, which is certainly not the sum total of all thought.

John W. Cook is a commentator who, like myself, notes that Whorf "does not embrace [an] unmitigated relativism," for Whorf certainly "allows for the possibility of escaping from the metaphysical implications of one's native tongue" (Cook, 1978, 22). Indeed, and as I discussed in §1.2, Cook reminds his readers that Whorf talks about language in relation to *habitual* thought, and that people's true potential to understand the world lies well beyond the original limitations of their unreflective language use (Cook, 1978, 22). Hill echoes this thought, and she says:

> Whorf contrasted an individual potential for a reflective consciousness of language–found among poets, linguistic scholars, and bilinguals–with 'habitual' unreflective vernacular adherence to its patterns. (Hill, 15)

It is quite clear, from reading Whorf, that his theory of linguistic relativity does not embody an inescapable determinism, and that the extent of the relativity is variable.

George Lakoff discusses, but does not support, an objection to Whorf which is similar to Keinpointner's: Whorf supposedly claims that the conceptual systems between, for example, English and Hopi, are incommensurable, but Whorf has described the Hopi's conceptual system in English terms, and so Whorf's premise of incommensurability must be wrong (Lakoff, 327). However, Lakoff notes that this objection is weak because it fails to take into consideration the complexity of Whorf's theory. He notes that commensurability entails five criteria: 1) *translation*, which Lakoff defines as "the preservation of truth conditions in sentence-by sentence translation;" 2) *understanding*, defined as "[a] given person using his general conceptualising capacities, *given the appropriate experiences*, can come to understand [another language's] aspectual system;" 3) *use*, defined as "aspectual categories...used automatically, unconsciously, and effortlessly. They are both fixed in the minds of individual speakers and conventional in their culture;" 4) *framing*, defined as "[a language's] aspectual system provides a way of framing events;" and 5) *organization*, defined as the "conceptual organisation–especially the system for categorising events" (Lakoff, 327-328). The above objection, says Lakoff, only uses the translatability criterion, and Lakoff argues that Whorf certainly believes that sentence-by-sentence translations are possible, and also that *understanding* is possible across languages, thus Whorf is not advocating the total incommensurability of conceptual systems (Lakoff, 327).

In a comparative objection to that of Keinpointner's, George W. Kelling claims that Whorf is subject to his own theory. He says:

> If Whorf's theory is true in any major sense, we can only conclude that we are unable to evaluate its truth. If we think it is true, it is only because it appears to be so when viewed through the prism of our own language. If we think it is false, either it is false or it appears to be false from our own linguistic framework. We have no way of telling which is the case... The problem with theories that restrain human beings from being paradigm cases of human beings... is that they lead to infinite regress, always because they are subject to their own laws. (Kelling, 49-50)

Whorf would certainly deny such an objection, for it assumes that people are deterministically bound within the framework of their language, and that it is therefore impossible to evaluate the effects one's language has on one's thoughts and world-view. But as I have discussed, Whorf's theory is not strictly deterministic, and Whorf obviously believes that it is possible to evaluate linguistic relativity.

2.3.2 Objection #2: "Translation is possible, so Whorf is wrong"

This next objection rests on the claim that translation is possible, thus Whorf could not have been correct about the supposed incommensurability of language systems. This differs from the previous objection (§2.3.1), in that the first objection maintains that Whorf could not have become aware of different conceptual systems if he was right about linguistic relativity; i.e., either Whorf was right about linguistic relativity but wrong about the claims he made about other languages, or Whorf was wrong about linguistic relativity altogether because he could recognise and understand certain aspects of other languages. The first objection contains the ambiguity that Whorf could have been right or wrong, depending on how he is interpreted.

This second objection makes the particular claim that because translation is possible, Whorf is wrong about linguistic relativity. There is no ambiguity in this objection–the claim is that Whorf is simply wrong. In Keinpointner's presentation of the objection, he says "in principle, translation of any text in source language A into target language B is possible," therefore Whorf could not have been right about linguistic relativity (Keinpointner, 477). He goes on to say that "we have to distinguish between translatability and understanding. Understanding is possible even in cases where explicit verbal rendering reaches its limits" (Keinpointner, 477).

One of the problems with this objection is that, for Whorf, the issue is not whether different languages can be translated, the issue is whether speakers of different languages perceive the objective world, or aspects of the objective world, differently. Recall my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," which states that Whorf assumes that each language embodies its own "metaphysics," which, for Whorf, is defined as the particular way a person perceives and cognitively categorises his or her experiences of the objective world (see also §1.3). Whorf does say that a statement in one language (A) can be translated into or paraphrased by another language (B), but in so doing, the "metaphysics" inherent in the second language (B) will dominate in the translation or paraphrase, overshadowing or eliminating the "metaphysics" inherent in the original language (A). For example, in his essay "Languages and Logic," Whorf claims that:

> Indo-European languages...give great prominence to a type of sentence having two parts, each part built around a class of word–substantives and verbs–which those languages treat differently in grammar... [T]his distinction is not drawn from nature; it is just a result of the fact that every tongue must have some kind of structure... [T]he contrast [between substantives and verbs] has been stated in...many different ways: subject and predicate, actor and action, things and relations between things, objects and their attributes, quantities and operations. And pursuant again to grammar, the notion became ingrained that one of these classes of entities can exist in its own right but that the verb class cannot exist without an entity of the other class, the "thing" class, as a peg to hang on. (Whorf, 1941a, 241)

Whorf says that in Indian languages, for example, there are perfectly intelligent and proper sentences "that cannot be broken into subjects and predicates. Any attempted breakup is a breakup of some English translation or paraphrase of the sentence, not of the Indian sentence itself" (Whorf, 1941a, 242).

Whorf provides a detailed example of a Nootka sentence which contains neither a subject nor a predicate, at least not in the English sense. The Nootka sentence is one word, composed of a root, which in this case denotes the event of "boiling or cooking," plus suffixes which denote the surrounding details of a feast: *tl'imshya'isita'itlma* (Whorf, 1941a, 242). The sentence can be "translated" into the English, "he invites people to a feast," but of course, in the English, there is a subject "he"–an agent performing an action–and the action "invites...". Although an English speaker can certainly understand, after translation and paraphrasing, the purpose and basic meaning of the Nootka sentence, Whorf's point is that the perspective of the native Nootka speaker is not that of an action performed by an actor, and yet that is the perspective put forth in the English. Therefore, it is the *perspectives* that Whorf would say are lost in the translation, not necessarily the truth conditions of a sentence.

Another example Whorf gives is the sentence "I hold it." Whorf maintains that "hold" is not an action "but a state of relative positions," but because "most of our verbs follow a type of segmentation that isolates from nature what we call 'actions'," we therefore "think of [hold] and even see it as an action because [our] language formulates it in the same way" as true action verbs such as "strike" (Whorf, 1941a, 243). Thus, says Whorf, English speakers "are constantly reading into nature fictional acting entities, simply because our verbs must have substantives in front of them" (Whorf, 1941a, 243).

For Whorf, when we translate, we can understand certain aspects of sentences, but unless we can grasp the "metaphysics" underlying the foreign language, certain aspects of what is being said may not be understood. Cook also makes this point, and he notes that:

> On the one hand, [Whorf] would no doubt say that we can always give the pragmatic equivalent of an English sentence in Hopi or in any other language.... Thus, despite the matter of tenses, a warning about the weather...can be translated from English into Hopi, because the differences between these languages do not lie at this level. On the other hand, Whorf would insist that something is inevitably lost in the translation, for the metaphysical implications of English grammar are not carried over into that sentence which is the pragmatic equivalent in Hopi. (Cook, 1978, 21)

Therefore, an objection such as Keinpointner's rests upon an oversimplistic understanding of what Whorf's linguistic relativity entails.

2.3.3 Objection #3: "All thoughts are expressible in a language, so Whorf is wrong"

This objection presumably relies upon the assumption that Whorf claims that certain thoughts are not expressible in certain languages. It is related to the previous objection (#2), but whereas the previous objection was concerned with the translation of the pragmatic meanings of sentences, this objection seems to be concerned with the more abstract, conceptual meanings of sentences. In the previous objection, in Whorf's defence, I noted that Whorf does grant that translation is possible, but that the "metaphysics" inherent in a language may be lost in the translation (see above, §2.3.2). This new objection (#3) is challenging that line of defence.

Keinpointner maintains that:

> ...with more or less extensive paraphrases and/or with the help of situational context...every language can express any possible thought at the discourse level. (Keinpointner, 478)

Furthermore, says Keinpointner, "Whorf does not sufficiently distinguish between language as a system...and language as speech or discourse" (Keinpointner, 478). His point seems to be that even if a language does not have the precise structure nor the exact words to deal with certain concepts (even "metaphysical" concepts, presumably), one can still get the point across, even if it means breaking the rules of grammar or stringing together numerous words to cover one idea.

This objection simply rejects Whorf's notion that a language places certain restrictions on the ways a person is able to perceive and thus to think about the objective world. As noted in my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," Whorf believes that it is simply a fact that people who speak different languages will have certain perspectives upon the objective world, for a language embodies its own "metaphysics" (defined as the particular way a person perceives and cognitively categorises his or her experiences of the world). Thus, because Whorf believes that our language provides us with a certain framework with which to observe the objective world, and that that framework does not include all perspectives of the world, we will thus not be able to have certain thoughts at all (while confined to that framework), let alone express them at the discourse level. As noted in my "Principle of Interpretation #5: Whorf is a Realist about the World," Whorf believes there to be one objective reality; his linguistic relativity principle only concerns the different *aspects* of that one reality that people experience (or "see") based upon the language(s) they know. With reference to my "Principle of Interpretation #4: Metaphysical Hierarchies," at the lower levels in the Metaphysical Hierarchy, there are certain thoughts about the objective world that people cannot have, for they do not yet have sufficient linguistic knowledge to provide them with the perspectives upon the world capable of providing those thoughts.

However, Whorf seems to believe that people are mentally capable of having any possible thought (at least about the objective world, reflecting the "metaphysics" of different languages), but only after learning many (or all) different languages and grasping the "metaphysics" that go with them. At this point (much higher in the Metaphysical Hierarchy), people will also presumably be able to *express* those thoughts, but I do not know if Whorf would say that these "metaphysical" perspectives can be expressed in a language other than the original language embodying the particular "metaphysics" in question. I tend to think that he would require the "metaphysical" concept to be expressed in its language of origin, but this is not something Whorf discusses.

Therefore, in direct response to Keinpointner's objection, all I can say is that it is based upon an interpretation of Whorf's theory that denies what I take to be some of its fundamental premises, namely, that a language embodies a "metaphysics" that allows or prevents its users from experiencing certain aspects of the objective world. Thus, for Whorf, those who are privileged to certain perspectives upon the world, through their linguistic knowledge, can both conceive of and presumably express the concepts embodied in those perspectives, while those who are not so privileged cannot express something that they do not have any experiences or thoughts about.

2.3.4 Objection #4: "Some of Whorf's examples were wrong, so let's trash everything he ever said"

This next objection attempts to discredit Whorf's linguistic relativity theory on the basis that some of Whorf's examples about the supposed lack of time-related structures in the Hopi language have apparently been shown to be incorrect. Keinpointner maintains that there have, in fact, been serious challenges to Whorf's statement that:

> ...the Hopi language is seen to contain no words, grammatical forms, constructions or expressions that refer directly to what we call 'time,' or to past, present, or future... Hence, the Hopi language contains no reference to 'time,' either explicit or implicit. (Whorf, 1950, 57-58)

Contrary to Whorf's assertion, Keinpointner informs us that studies have shown that:

> ...a tense system does exist in Hopi, albeit different from the tense systems commonly found in SAE languages. It is characterised by an opposition between non-future...and future. (Keinpointner, 479)

Keinpointner claims that because Whorf "based some of his main arguments for [his linguistic relativity principle] on his interpretation of linguistic structures in the Hopi language," the fact that he was wrong about the tense system casts doubt upon his entire theory (Keinpointner, 479).

There are two problems with Keinpointner's objection. First, even if Whorf was incorrect in his analysis of Hopi tenses, I do not think that this one discrepancy is justification enough to reject Whorf's entire theory of linguistic relativity. Such a move seems unfair, if nothing else, for it encourages a quick dismissal of Whorf's theory without taking into consideration anything else Whorf said.

Second, and perhaps most importantly, I do not interpret Whorf as basing his *arguments* for linguistic relativity upon the *examples* that he gives. Such an interpretation implies that Whorf was positing an empirical hypothesis, and that his examples were meant as empirical proof. However, in accordance with my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," Whorf's theory is a philosophical, non-empirical thesis which assumes as an *a priori* truth that a language influences the ways a person experiences the objective world. As I mentioned in §1.3, the examples Whorf gives about the differences between the ways people of different languages perceive the world and categorise experiences (including his examples about Hopi time) are not meant to be *proof* supporting an empirical claim. Instead, the examples are meant to *display* what Whorf takes to be some of the perspectives available to various language speakers, to give his readers an appreciation of the range of options open to different languages. Thus, Keinpointner has again provided an objection based upon a misinterpretation of a fundamental aspect of Whorf's theory.

Another commentator who discusses Whorf's assertions about Hopi time is Helmut Gipper, who travelled to the U.S. to do his own research on the Hopi. His goal was not only to verify or to correct Whorf's data, but also to "elucidate the important problem of the interrelations between thought and language, language and culture, and language and society" (Gipper, 218). In accordance with Keinpointner's criticism, Gipper found that Whorf was incorrect in his claim that the Hopi have no conception of time. Gipper's studies indicate that the Hopi do, in fact, have a conception of time, but he notes that, although Whorf's statements on the issue were sometimes "exaggerated" (or simply wrong), "there remains evidence for the fact that Hopitime is, in various aspects, different from ours" (Gipper, 224).

One difference Gipper found is that, although Hopi grammar has means to express present, past, and future, he claims that:

> ...Hopi *thinking* seems to be governed by a bipartition of time ('present + past' and 'future') instead of the tripartition of time ('past' - 'present' - 'future') we are accustomed to. (Gipper, 223, my emphasis)

Thus, he says, this finding "corresponds at least partly with Whorf's dispersed data" (Gipper, 223).

Another time-related difference that Gipper found between the Hopi and modern Western society is that the Hopi conception of time is "cyclical" rather than "linear." Gipper explains this "cyclical" conception of time:

> We may compare the cycle of Hopi life to a wheel which turns eternally on one spot without progressing. As the Hopi have no calendar year, years are not counted continuously. What people experience seems to be the steady repetition of the same sequence of events, of seasons, of seedtime, harvest, winter, spring, and so on. They live in time, but not *apart* from it, they are bound up in time but are not neutral observers of physical time.... They have not yet reached that detachment from events which is one of the outstanding prerequisites for our Western concept of physical time. (Gipper, 225-226)

However, Gipper remarks that such an experience of time is not necessarily unique to the Hopi, for he maintains that it is quite typical of any simple peasant society, even in Europe, in which the people are integrated in the physical environment (Gipper, 226). He notes that such fundamental concepts as space and time "are not exclusively bound to language but are dependent– as language itself–on the whole 'context of culture' of the given society" (Gipper, 225).

From the evidence presented by Gipper, it appears that the concept of time held by the Hopi people is entirely cultural and not linguistic, for even though there are grammatical structures in the Hopi language to express time comparable to a Western notion, the Hopi people, *in spite* of their language, *think* about time somewhat differently, as related directly to their culture. That is, Gipper maintains that the Hopi's *experience* of time is *different from* the structure of time existing in their language; the structure of Hopi people's *thoughts* about time does *not* correspond to the grammatical structure of time in their language. Instead, the Hopi people's thoughts about time directly reflect their *cultural* experiences, but *neither* are represented in the grammatical structures of the Hopi language. This observation is contrary to Whorf's claims, for according to Whorf, the Hopi language *should* reflect the cultural influences which shape the peoples' experience of time (*and* vice versa, i.e., the culture should reflect the linguistic structures of time), for as I discussed in §1.5, Whorf believes that culture and language are intertwined, having developed together.

Gipper ends his essay by remarking that his interpretation of the data he gathered from the Hopi "takes account of the whole cultural context of Hopi life including language" (Gipper, 227). However, he does, in general, place a strong emphasis on the role of language. In accordance with Whorf's views, he says that:

> Language is understood as an obligatory medium of thought which has been formed by the speaking community during the centuries and which...shapes and influences the behaviour of the speaker.... Human thought is, to be sure, relative to the possibilities of the languages in which it is expressed. (Gipper, 227)

So, while Gipper, like Keinpointner, has found some fault with some of Whorf's examples, on that basis alone he is certainly not willing to give up on all the ideas surrounding Whorf's view of linguistic relativism, for he says:

> In...the wide middle zone in which human life and behaviour takes place, we find differences which characterize cultures and

> civilisations. It is highly important and relevant to discover these differences. Therefore we have to investigate the linguistic world views of the given languages in order to find a key to better understanding among the peoples of this world. (Gipper, 227)

Whorf couldn't have said it better.

2.3.5 Objection #5: "Different perspectives are found in one language, so Whorf is wrong"

This objection is based on the assumption that Whorf's theory does not allow for differing perspectives (or world-views) amongst people who share a language. Keinpointner maintains that, "Whorf does not distinguish sufficiently between the world views expressed by everyday language, (scientific) languages for more special purposes and more specific uses of language typical for political or religious ideologies" (Keinpointner, 478). As a result, says Keinpointner, Whorf is unable to "explain the fact that one and the same language...can be used to express many competing scientific and ideological positions" (Keinpointner, 478).

It is not clear what Keinpointner means by the terms "world view" and "ideologies," but it seems as though he is using them synonymously. In my interpretation of Whorf, "world-view" consists of the particular way a person perceives and categorises his or her experiences of the objective world, and this world-view is embodied within the structures of a language (Whorf also calls this a "metaphysics") (note my "Principle of Interpretation #3," and §1.3). The term "ideology" seems to me to present quite a different phenomenon, perhaps that of a normative collection of beliefs and values. Issues about "ideology" seem to be rather peripheral to Whorf's theory of linguistic relativity, for I interpret his theory to be primarily concerned with the "metaphysical" aspects of people's language and thought, i.e., the way we "dissect nature" and categorise our experiences of phenomena in the world (Whorf, 1940c, 213). It may certainly be true that our language plays a role in establishing social and political ideologies,[3] but I think that to focus on this issue, and to criticise Whorf for not addressing it, is to misinterpret a main thrust of Whorf's theory. With reference to my "Principles of Interpretation #3, 4, and 5," Whorf is positing a metaphysical theory in which language plays a large role in how we perceive objective reality, and it is these perceptions that vary across languages.

As for Keinpointner's claim that Whorf does not "distinguish sufficiently between the world views expressed by everyday language [and by] (scientific) languages for more special purposes," Whorf, in fact, *does* just that. Whorf discusses the existence of scientific languages, and he says:

> What we call "scientific thought" is a specialisation of the western Indo-European type of language, which has developed...a set of different dialects. (Whorf, 1942, 246)

Furthermore, Whorf claims that:

> Every language and every well-knit technical sublanguage incorporates certain points of view and patterned resistances to widely diverse points of view. (Whorf, 1942, 247)

Thus, contrary to Keinpointner's claim, it sounds like Whorf is, indeed, able to "explain the fact that one and the same language...can be used to express many competing scientific...positions," for he clearly says that one language can contain different scientific "sublanguages," each reflecting their own "points of view."

Furthermore, if one accepts my interpretation of the metaphysical aspects of Whorf's theory, in particular my "Principle of

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[3] There are many scholarly works on this very issue, and as I shall discuss in Chapter 4, much of the newer work on linguistic relativity focuses on language as a shaper of social conventions.

Interpretation #4: Metaphysical Hierarchies" and my discussion in §1.4, it explains the allowance for differences in world-view within a single language, not necessarily counting scientific sublanguages. If each language itself has an underlying hierarchical structure, then the level a person is at in his or her single-language Hierarchy depends upon the amount of knowledge that person possesses about his or her language. A greater knowledge and understanding of a person's own language enables that person to ascend both in his or her single-language Hierarchy and in the Ultimate Metaphysical Hierarchy of which all languages are a part.

Therefore, based on specific remarks from Whorf and upon my interpretation of his theory, there is ample evidence to show that Whorf allowed for differences in perspective within one language.

2.3.6 Objection #6: "Biology plays a role in how we perceive the world, so Whorf is wrong"

This next objection is presumably based upon the assumption that Whorf does not consider the existence of biological traits common to all people in the formulation of his theory of linguistic relativity. Keinpointner mentions the results of tests done on speakers of Dani in Western New Guinea concerning colour perception. He reports that:

> ...even speakers of languages which have only few colour terms [Dani has two] can learn new colour expressions much easier if they [the expressions] designate focal colours, that is, colours which are more easily perceived via the human neurophysiological apparatus. (Keinpointner, 479).

Keinpointner concludes that:

> ...despite all differences in lexical structures which, no doubt, have a certain influence on our perception of the world, we can conclude that there are universal biological constants common to all human beings. (Keinpointner, 479)

While Keinpointner does not explicitly say how his point is an objection to Whorf, I presume that he means to call into question Whorf's notion that people who speak different languages have different ways of perceiving the objective world. However, for Whorf, it is not in *every* way that people perceive the world differently, based on their languages, rather it is the particular ways people automatically categorise the things and events that they see (note especially §1.2). Furthermore, Whorf does *not* deny that there are "biological constants common to all human beings." For example, he says:

> ...visual perception is basically the same for all normal persons past infancy and conforms to definite laws... If the perceptual influences are such as to cause one normal person to see a definite outline [e.g.], they will cause all other normal persons to see the same outline. (Whorf, 1940a, 163-164.)

With regards to colour perception in particular, Whorf notes that:

> To say that the facts [of visual perception] are essentially the same for all observers is not to deny that they have their fringe of aberrations and individual differences, but these are relatively minor.... Colour blindness and unequal sensitivity to colours are... marginal variations... (Whorf, 1940a, 163)

Thus, contrary to Keinpointner's objection, Whorf believes that there are "biological constants" common to all people, and that colour perception is one of them.

2.3.7 Objection #7: "Differences in cognition do not follow from differences in language, so Whorf is wrong"

The last specific objection to Whorf that I shall address comes not from Keinpointner, but from another critic, Einar Haugen. Haugen's main objection to Whorf's theory is that there is no proof that cognitive differences result from the differences in a language. He discusses some of Whorf's examples of sentences in Native-American languages that differ structurally from sentences in English, and he says:

> At best these sentences confirm the well-established fact that different cultures talk about things in nature and have applied different analogies in expanding their vocabularies from the concrete to the abstract (or vice versa). These are interesting and important features in the relation of man to his culture and to his use of language within that culture. But they do not justify any judgments concerning a qualitative difference in the way men think. (Haugen, 15)

Haugen acknowledges, and thus agrees with Whorf, that differences do occur in the way people of different languages and cultures describe their surroundings. However, he refuses to accept Whorf's *a priori* claim that differences in thought patterns automatically follow from differences in the linguistic description of experiences (note my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," and see §1.3). Haugen wants empirical proof before he is willing to concede that "qualitative differences" in the way people think follow from differences in language.

According to my interpretation of Whorf, the justification Haugen seeks simply cannot be provided within the framework of Whorf's theory. Whorf operates on the assumption that linguistic relativity is a fact, and that cognitive differences *automatically* follow from differences in linguistic patterns, based upon a language's inherent "metaphysics" (again, note my "Principle of Interpretation #3," and see §1.3). Thus, a fair assessment of Whorf's theory cannot be made unless one is willing to accept its philosophical, non-empirical nature; otherwise, one will be arguing about something other than Whorf's theory.

2.4 A Dismissive Critic

Most of Whorf's critics try to provide persuasive arguments for their objections to Whorf's ideas. However, one critic in particular, Ann E. Berthoff, provides a scathing, extreme criticism of Whorf and his views, claiming that Whorf should simply be dismissed. She maintains that Whorf "was not a philosopher; he had neither philosophical interests nor philosophical instruments to guide his inquiry," thus he was incapable of effectively dealing with the issues that he tried to undertake (Berthoff, 2). Contrary to my claims that Whorf's theory is predominantly metaphysical, Berthoff criticises Whorf's supposed "mechanistic sense of causality and...impatient disregard for the metaphysical aspects of language," although she does not specify what sort of metaphysics she is referring to (Berthoff, 4). She maintains that Whorf's supposed "mechanistic sense of causality" led him to provide his "empty gasoline drum" example, which she dismisses, saying that all it proves is that the worker involved is either stupid or ignorant (Berthoff, 5). Of course the worker was ignorant (and possibly stupid), for as Whorf explains, the worker did not have knowledge of the full spectrum of reference for "empty," thus his linguistic ignorance caused him to behave dangerously (see §1.2 for a discussion of this example). Note also that, in my interpretation, Whorf's linguistic relativity is essentially *epistemological*, for it is people's *knowledge* about their world–and about their own language–that is relative (see §1.4, 1.6). Berthoff goes on to say that Whorf "was uninterested in the context of situation or in experiential constraints on interpretation" (Berthoff, 5), and yet, as I have argued, that was precisely Whorf's point (see §1.2).

Continuing her quest to discredit Whorf, Berthoff remarks that:

Whorf moves from language to thought, from thought to language,

> in a sidling, sliding sort of way which leaves the attentive reader mystified, unsure of how he got from one to the other. (Berthoff, 6)

She asks, in a tone obviously meant to present Whorf as confused:

> If our mother tongue does our segmenting for us and, simultaneously, our expressing, does it also do our thinking for us? Do speakers control the dissecting–or does language? (Berthoff, 7)

One wonders if Berthoff has completely missed Whorf's point throughout his writings, for it is precisely because Whorf believes language and thought to be fundamentally intertwined, and thus difficult or impossible to separate, that he formulates his theory of linguistic relativity (note especially my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," and see §1.3).

Berthoff also criticises Whorf's writing style. Admittedly, the claims that Whorf is trying to make are sometimes not completely clear, but Berthoff contends that Whorf "manipulates language to cover up contradictions and faulty inferences" (Berthoff, 9). I hardly think that Whorf purposely sets out to mislead his readers. Berthoff also accuses Whorf of using "pointless oxymorons," of displaying "logical weakness," and of "zealously" contributing to "that rubbish heap to which all good positivists enjoy contributing" (Berthoff, 11). These latter comments scarcely deserve a response, except to say that I don't think Whorf is a positivist.

Almost all of Berthoff's remarks seem to be a personal and angry confrontation with a sworn enemy, for she does nothing to try to hide the obvious scorn and contempt that she harbours towards Whorf and his writings. Based on my interpretation of Whorf (which, I grant, may be generous at times, but I give him the benefit of the doubt that he had a brain, and that his intentions were good), Berthoff's remarks seem quite off-base and unnecessarily harsh, as though she has a personal vendetta against the man. Her acid tongue (which goes beyond mere wit in its relentlessness) makes it impossible to discern if there are any valid arguments she has made against Whorf's writings. I am inclined to dismiss Berthoff as quickly as she is willing to dismiss Whorf.

2.5 Closing Remarks

In this chapter, I have presented some of the main objections people have to Whorf's ideas. I hope I have shown that many of the objections stem from a misunderstanding of Whorf's theory, possibly based on a superficial reading of Whorf's texts. Whorf's theory is very complex, and he lays it out rather inexplicitly throughout his writings; people must be patient and dig to find the treasures within, or else they may simply come away baffled, hastily dismissing what little they think they have found. In the next chapter, I present some commentators whose patience with Whorf has resulted in a deeper understanding and appreciation of his work.

Chapter 3

Kind Words and Sympathetic Interpretations

In this chapter, I shall examine some of the commentators who find merit in Whorf's work, and some whose interpretations of Whorf are similar to mine. I shall also discuss a couple of empirical investigations meant to try to prove the existence of linguistic relativity.

3.1 Giving Whorf Some Credit

In his book *Women, Fire, and Dangerous Things* (1987), Lakoff provides a sympathetic reading of Whorf. He discusses a general notion of relativity, defined in the statement that "other human beings comprehend their experience in ways that are different from ours and *equally valid*" (Lakoff, 306, my emphasis). I emphasised the latter part of this remark, for it corresponds to a statement made by Whorf in his discussion about English speakers and Hopi speakers having different perspectives upon the objective world:

> Just as it is possible to have any number of geometries other than the Euclidean which give an equally perfect account of space configurations, so it is possible to have [different] descriptions of the universe, all equally valid... (Whorf, 1950, 58)

As exemplified by my "Principle of Interpretation #3," Whorf's theory of relativity concerns the different ways that people cognitively categorise their experiences of the objective world; according to my "Principle of Interpretation #5," all people experience one and the same reality, but from different perspectives. Thus, Lakoff's notion of relativity–that people who speak different languages comprehend the world accurately, but differently–correctly reflects Whorf's theory.

Lakoff rightly notes that with regards to his theory of linguistic relativity, Whorf was mainly concerned with more fundamental concepts like space and time rather than less fundamental concepts like "*chutzpah* in Yiddish" (Lakoff, 307-308).[4] Indeed, Whorf's discussions are generally about the "classification and arrangement of the stream of sensory experience which results in a certain world order" (Whorf, 1936, 55). Summing up many of the basic elements in Whorf's theory, Lakoff says:

> ...fundamental concepts tend to be grammaticised, that is, to be part of the grammar of the language. As such, they are used unconsciously, automatically, and constantly. In general, grammaticised concepts are viewed as more fundamental than concepts expressed by vocabulary items. (Lakoff, 308)

Most of my discussion in §1.2 centres around these very ideas as an introduction to some of the main premises of Whorf's theory of linguistic relativity. These ideas provide the groundwork for Whorf's more theoretical philosophical notions.

Lakoff makes an interesting distinction between what he calls "conceptual systems" and "conceptualizing capacities": people may have different conceptual systems, but if they have the same conceptualizing capacities, then it may be possible for them to understand one another (Lakoff, 310). Although Whorf does not explicitly discuss such a difference, it is apparent upon my interpretation of his theory that he allows for the distinction. Within Whorf's Metaphysical Hierarchy (see "Principle of Interpretation #4"), at the lower levels people who speak different languages have different conceptual systems, but there is certainly the possibility for people to learn and to understand other conceptual systems. Thus people, and Whorf would probably say all people, have the same "conceptualizing capacities," for once they rise above the narrow frame of reference offered at the lower levels of the Metaphysical Hierarchy, they can understand concepts available from other perspectives.

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[4] "Chutzpah" is defined as "Brazen effrontery; gall" (*Funk & Wagnalls Standard Dictionary*, New York: Signet, 1980.)

In addition to sharing some of my interpretations, Lakoff also provides words of support for Whorf's theory of linguistic relativity:

> I am convinced by Whorf's arguments that the way we use concepts affects the way we understand experience; concepts that are spontaneous, automatic, and unconscious are simply going to have a greater (though less obvious) impact on how we understand everyday life than concepts that we merely ponder. To me, conceptual systems are different if they lead consistently to different understandings of experience. Therefore, conceptual systems whose concepts are used differently are, to me, different systems. (Lakoff, 335).

As far as Lakoff is concerned, Whorf is correct in positing the notion that different languages provide people with different metaphysical frameworks ("conceptual systems") by which to understand the objective world.

3.2 Whorf's "Metaphysics"

Cook is another writer who defends Whorf, and he also recognizes the metaphysical nature of Whorf's theory. In his essay "Whorf's Linguistic Relativism," he says:

> The kind of thinking that Whorf's thesis speaks of is what he also calls "a world view" or a "metaphysics." This, I shall argue, is an essential feature of Whorf's thesis, and the reason is that a connection can plausibly be alleged to hold between grammar and metaphysics which could not plausibly be alleged to hold between grammar and any other sort of "thinking." (Cook, 1978, 2)

Cook claims that, for Whorf, "grammar just *is* a kind of metaphysics, with the corollary that one can read off a metaphysics from suitable samples of grammar" (Cook, 1978, 2). To interpret Whorf in this way, says Cook, explains Whorf's "practice of presenting examples of Hopi or Shawnee or

Apache grammar and straightaway diagnosing the 'thought' of those who speak these languages" (Cook, 1978, 2).

Cook notes that Whorf's theory is often criticised because, it is argued, it does not seem likely that grammar is the sort of thing that can influence the way we think and cause certain thoughts in our heads. Cook says, for example, that:

> ...it seems implausible, if not downright absurd, to suppose that speaking a language whose nouns are declined would cause me to believe that there is life on Mars or to believe in reincarnation or to regard red-haired people as inferior beings. (Cook, 1978, 3)

But of course, Whorf never makes such ridiculous claims, and Cook rightly notes that such an interpretation is bound to lead to the rejection of Whorf's ideas. It is more accurate, says Cook, to interpret Whorf's theory as follows:

> Perhaps what is supposed to differ, as the result of our speaking a language whose grammar differs greatly from Hopi and Shawnee, is only our metaphysical "picture of the universe," as Whorf puts it. (Cook, 1978, 4)

Based on my interpretation, this is precisely the sort of thing that Whorf is talking about. As Cook notes, "[t]he kind of thinking that Whorf's thesis speaks of is what he also calls 'a world view' or 'a metaphysics' (Cook, 1978, 2). Indeed, as defined in my "Principle of Interpretation #3," "metaphysics" and "world-view" are essentially synonymous for Whorf, referring to the particular way people perceive and cognitively categorise their experiences of the objective world, based upon the language(s) they speak.

Cook's interpretation of Whorf dissents from mine in that Cook claims that, for Whorf, grammar and "metaphysics" are not causally related distinct phenomena, but rather, our "grammar and our unreflective metaphysical ideas are *one and the same*" (Cook, 1978, 4, my emphasis). By interpreting Whorf in this way, Cook believes that he avoids the difficulties of how we can infer the "metaphysics" from a grammar and how grammar could make us think what we would otherwise not think (Cook, 1978, 4). While I understand Cook's motivation for making this claim, I do not think that this interpretation is correct; for I do not think that Whorf believes grammar and "unreflective metaphysical ideas" to be "one and the same." Rather, I would interpret Whorf as claiming that the *structure* of one's grammar is the same as the *structure* of one's "unreflective metaphysical ideas," at least at the lower levels of the Metaphysical Hierarchy (see "Principle of Interpretation #4: Metaphysical Hierarchies"). Whorf says things like: "We dissect nature *along lines laid down* by our native languages" (Whorf, 1940c, 213, my emphasis); "language...is a classification and arrangement of...sensory experience *which results in* a certain world order" (Whorf, 1936, 55, my emphasis); "users of markedly different grammars are *pointed by* their grammars towards different types of observations...and hence...must *arrive at* somewhat different views of the world" (Whorf, 1940b, 221, my emphasis); and "the grammar...of a language is...a *shaper* of ideas" (Whorf, 1940c, 212, my emphasis). Thus, it seems to me that Whorf believes that our "unreflective metaphysical ideas" are merely *shaped by* our grammar; and so the *structure* of those ideas will be the same as the *structure* found in our grammar, but the grammar and the ideas are not "one and the same."

Furthermore, I do not think that Whorf believes that there is a problem in inferring the "metaphysics" from the grammar, as Cook puts it. As noted in my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity," Whorf's theory is a philosophical thesis which assumes as an *a priori* truth that the language a person speaks affects the way they view the objective world, because of the influence that language has over our thoughts (see also §1.2, 1.3). Cook correctly says of Whorf's theory that:

> ...to speak in a certain language just *is* to operate with, to think with, certain metaphysical categories. (Cook, 1978, 12)

I grant that, for Whorf, our grammar gives us "metaphysical" *categories*, but not that it *is* our "metaphysical" *ideas*.

Cook's analysis of Whorf differs from mine in another important way: he does not pay attention to all the different strands of Whorf's theory. He does not, for example, mention the notion of a Metaphysical Hierarchy, nor of the generally hierarchical nature of language, as I discuss in §1.4. My analysis is a more detailed working out of the many facets of Whorf's theory, attempting to combine them into a coherent whole.

3.3 Hierarchies and Humanitarianism

William J. Ellos discusses a relationship between language and "ultimate reality" which he has extracted from Whorf. He also emphasizes the metaphysical aspects of Whorf's theory, but unlike Cook, he focuses on the hierarchical structure of language. Ellos notes that Whorf has a "linguistic metaphysics" in which different levels exist (Ellos, 146). Ellos describes some of the hierarchical levels using his own terminology, saying that the first consists of "surface phenotypical patterned relations of language," which are the grammatical structures of languages (Ellos, 146). It would be at this level that Whorf would say people are most strongly influenced by the patterns of their language. Ellos interprets Whorf as saying that after a person has "worked out" the patterned relations of his or her language, then a "deeper[5] level of a kind of logic" will be obtainable, followed by ever-deepening levels, eventually reaching a level of "ultimate reality combining all elements... It is the realm of harmony, beauty, aesthetic delight, love, sympathy, and music" (Ellos, 146).

In most important respects, Ellos' account corresponds to my notion of Whorf's Metaphysical Hierarchy, particularly insofar as it is posited that people acquire greater understanding of the ultimate world as they ascend through the levels in the Hierarchy (note "Principle of Interpretation #4" and §1.4). With regards to the last part of Ellos' quote (above), as I noted in §1.4, Whorf says that,

> ...through a wider understanding of language than western Indo-European alone can give...is achieved a great phase of human brotherhood.... It causes us to transcend the boundaries of local cultures, nationalities, physical peculiarities dubbed "race," and to find that in their linguistic systems, though these systems differ widely, yet in the order, harmony, and beauty of the systems, and in their respective subtleties and penetrating analysis of reality, all men are equal. (Whorf, 1942, 263)

The fact that Whorf envisioned a sort of humanitarian utopia adds an interesting element to his work. It seems that Whorf's ultimate aim was to make the world a better place, through a greater understanding of people and their relation to the world.

Whorf's humanitarianism was also not lost on Lakoff, who says:

> One all-important thing should be remembered about Whorf. He did most of his work at a time when Nazism was on the rise..., [and] white people were assumed...to be more intelligent than people with skins of other colours. Western civilization was assumed to be the pinnacle of intellectual achievement... Whorf was not only a pioneer in linguistics. He was a pioneer as a human being. That should not be forgotten." (Lakoff, 330)

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[5] I describe the levels of Whorf's Metaphysical Hierarchy as "lower" and "higher", for Whorf himself uses these terms, and they seem more applicable to a hierarchical structure. I would say that "deeper" describes the understanding one has as one ascends in the Metaphysical Hierarchy.

Comparing these remarks to those of Berthoff (as discussed in §2.4, "A Dismissive Critic"), it is hard to reconcile the man of whom Lakoff speaks with the "manipulative" and conniving man described and criticised by Berthoff. Lakoff's inspired words cast even more doubt upon Berthoff's already dubious criticisms of Whorf, for he presents Whorf as a figure not to scorn, but to admire.

3.4 Some of Whorf's Insights About the Influence of Language Patterns on Thought

One aspect of Whorf's linguistic relativity theory not previously discussed herein is his classification of and distinction between "phenotypes" and "cryptotypes," or "overt" and "covert" classes in language. John Lucy cites this distinction as evidence that Whorf had at least the beginnings of a very "sophisticated theory of language and thought interaction" (Lucy, 1992a, 31). In fact, Lucy places great importance on Whorf's distinction between these two types of classifications in language. He notes that Whorf sometimes uses the terms "overt categories" and "covert categories" synonymously with "phenotypes" and"cryptotypes," and sometimes he uses the latter terms as subsets of the former (Lucy, 1992a, 27-28). The definition Lucy favours is that phenotypes and cryptotypes are the "*grammatical meanings* of overt and covert categories respectively" (Lucy, 1992a, 28).

Ellos also emphasizes Whorf's distinction between overt and covert categories as an important element in his theory, defining phenotypes (overt categories) as suffixes, prefixes, tenses, aspects, voices, moods, and other grammatical forms (Ellos, 144). Cryptotypes, as Ellos interprets them, are "much more submerged and subtle," he says, echoing Whorf, who says that a "cryptotype" has a "submerged, subtle, and elusive meaning" (Ellos, 144; Whorf, 1956 ,70). Ellos notes that cryptotypes exist as covert categories into which "we have grouped various ideas into sets and classes" (Ellos, 144). Ellos explains the latter by citing things such as gender in language; for example, he says that in English certain things such as ships are thought of as feminine. Although there is no "overt surface reason" (or phenotypical reason) why a ship is referred to as "she," there is a "cultural mindset" which classifies ships in this way (Ellos, 144).

Whorf, indeed, defines cryptotypes and phenotypes primarily as Lucy and Ellos do. He says:

> A covert linguistic class...may have a very subtle meaning, and it may have no overt mark other than certain distinctive "reactances" with certain overtly marked forms. It is...what I call a CRYPTOTYPE. It is a submerged, subtle and elusive meaning, corresponding to no actual word, yet shown by linguistic analysis to be functionally important in the grammar. (Whorf, 1956, 70, capitals in the original.)
>
> In contrast to the cryptotype I give the name PHENOTYPE to the linguistic category with a clearly apparent class meaning and a formal [overt] mark or morpheme which accompanies it... (Whorf, 1956, 72, capitals in the original.)

In his discussion of gender in language, Whorf notes "gender nouns" such as boy, girl, uncle, and aunt, as well as names such as George, Fred, Mary and Jane (Whorf, 1956, 68). Whorf claims that words such as these are covertly grouped into masculine or feminine categories corresponding to overt differences in gender, for we have "a sort of habitual consciousness of two sex classes as a standing classificatory fact in our thought-world," thus upon hearing or seeing the name "William" or the word "father," we will automatically link it with "masculine" (Whorf, 1956, 69). Similarly, Whorf notes that Navaho "has a covert classification of the whole world of objects based partly on animation and partly on shape," and that for inanimate objects, there are two classes roughly translatable as "round objects" and "long objects" (Whorf, 1956, 68-69). The Navaho people supposedly intuitively link any given object either to the "round" class or to the "long" class, just as English speakers supposedly intuitively link certain things to masculine or feminine categories (Whorf, 1956, 70).

Both Lucy and Ellos agree that, for Whorf, overt categories have clear formal "markers" so that members of the category are plainly obvious, e.g., the plural of English nouns usually have different spellings or use different articles from singular forms. Members of covert categories, on the other hand, for Whorf, generally do not have obvious and clear "markers," e.g., in English, non-gender specific words, such as proper names, are covertly classed, i.e., due to memorization and/or cultural influences, a name such as "George" is covertly classified as "male." Whorf notes that:

> ...mistakes in English gender made by learners of the language... would alone show that we have here covert grammatical categories, and not reflections in speech of natural and noncultural differences. (Whorf, 1945, 90-91)

Therefore, Whorf seems to be saying that covert categories are both grammatical *and* culturally influenced. This is an important point for Whorf's theory, for it shows that language cannot be viewed as entirely independent of those who speak it, and of the world in which they live, rather there are elements of language which are bound together with culture (note my discussion in §1.5 about the role of culture in Whorf's views).

3.5 Whorf's Relativity Not Too Radical

Lucy notes Whorf's efforts to provide a standard of comparison for languages, independent of the languages in question. He cites Whorf's essay "Gestalt Technique of Stem Composition in Shawnee," in which Whorf says:

> To compare ways in which different languages differently "segment" the same situation or experience, it is desirable to be able to analyze or "segment" the experience first in a way independent of any one language or linguistic stock, a way which will be the same for all observers. (Whorf, 1940a, 162)

Whorf then provides the following language-independent possibility:

> A discovery made by modern configurative or Gestalt psychology gives us a canon of reference for all observers, irrespective of their languages or scientific jargons, by which to break down and describe all visually observable situations... This is the discovery that visual perception is basically the same for all normal persons past infancy and conforms to definite laws... (Whorf, 1940a, 163)

Thus, Lucy recognizes Whorf's:

> ...positive attitude toward the search for commonalities, or universals, across languages and his openness to consider both specifically linguistic and extralinguistic factors as the basis for such commonality. (Lucy, 1992a, 36)

I think Lucy's remark rightly indicates that Whorf is not positing a radical, and thus impossible to accept, theory of relativity in which *all* aspects of the world appear differently to those with different languages, rather, there are, for Whorf, universal constants irrespective of language (note my discussion of this in §2.3.6, "Objection #6: Biology plays a role in how we perceive the world..."). With reference to my "Principle of Interpretation #5: Whorf is a Realist about the World," Whorf is not an anti-realist who believes that each language produces it's own complete and world-independent reality, rather, he believes there is just one objective reality, but people perceive it differently based upon the language they speak. Thus, Whorf's linguistic relativity is essentially *epistemological* in that it is people's *knowledge* about the world that differs and is thus relative according to the language(s) they speak (see also §1.6).

One commentator, Joshua Fishman, somewhat erroneously and contrary to my claims, interprets Whorf as being more of an anti-realist than a realist, saying of Whorf that:

> ...language is not "merely" a vehicle of communication by which man talks about some objective reality "out there" that exists previous to and independently of his language, but, rather, that language itself represents an objective reality by means of which man structures and organizes the "out there" in certain characteristic ways. (Fishman, 325)

For Whorf, the "out there" does exist previous to and independently of language, and minds and languages are necessary to decode the sensory information we receive from the world (from the real "out there"). We perceive so much, and our language, Whorf would say, plays a role (even a very large role) in filtering out certain aspects, focussing on others, which become the way we "see" the world (see §1.2). It is Whorf's claim that people whose languages differ significantly filter out different things, and focus upon different things, thus providing its users with a somewhat different "picture" of the world. Nonetheless, we are all seeing the same world, but we are seeing it differently; it is *our seeing* of the world, and thus our *knowledge* of the world, that differs across language groups, not the world itself (recall my language-shaped glasses analogy in the Introduction). Thus, language itself provides an objective reality (to use Fishman's words) only insofar as it provides an incomplete picture of the whole of reality, each language grasping only certain aspects of the whole. For Whorf, there is not some objective reality about which we know nothing; it is not as though all people walk around with purely subjective, anti-realist notions of the world in their heads. Lakoff agrees with my interpretation, remarking that, "Whorf... believed that there was an objectivist reality" (Lakoff, 324). For Whorf, our impressions of the world come from the things "out there," regardless of the language we speak, but the language we speak strongly influences how we organise those impressions into patterns; those patterns, believes Whorf, reflect, because they are shaped by, the patterns inherent within the grammar of our particular language.

I think Whorf wants to point out some similarities, or samenesses, across languages, to provide a backdrop against which differences will be more readily observable. For instance, Whorf discusses an example of a running boy, and he says,

> There is one thing on which all observers of the appearance of a running boy will agree...and they will all make the division in the same way. They will divide it into (1) a figure or outline having more or less of motion (the boy) and (2) some kind of background or field against which, or in which, the figure is seen... (Whorf, 1940a, 163)

Beyond that, Whorf claims that speakers of different languages will "segregate different essentials out of the same situation" (Whorf, 1940a, 162). For example, Whorf claims that in English, we may say "the boy ran," whereas a "hypothetical" native American language "might use three or more lexemes...; perhaps (1) movement-of-foot (2) over-a-surface (3) manifestation-of-boy-occurs-quickly" (Whorf, 1940a, 161).

Furthermore, says Whorf, if the hypothetical native language is similar to Shawnee, it might express the sentence (1)-(2)-(3) (above) "by a polysynthetic compounding of stems and formatives into one formal word" (Whorf, 1940a, 162). At any rate, says Whorf, "the really important difference from English is...that [the native language] has isolated the peculiar group of essentials (1), (2), (3), and ignored [the English] isolation of 'boy (as actor)' and 'ran'" (Whorf, 1940a, 162). Compare this to my discussion in §2.3.2 about Whorf's claim that English speakers categorise experiences into an "actor and action" contrast, which does not occur in all languages (Whorf, 1941a, 242-243).

Perhaps the most important thing for Whorf is to become aware of the influence our language has over our perspectives on the objective world. Once we have become aware of this influence, Whorf would say that we can then begin to explore the possibilities of different perspectives, acquired by learning more about our own language and about other languages. By acquiring new perspectives on the world (which we can add to our original perspectives), Whorf argues that we will be able to see more of the world, and thus to have a broader picture of reality.

3.6 Can Whorf's Theory Be Proven?

In his interpretation of Whorf, Cook makes a point with which I am sympathetic; he believes that it is incorrect to define Whorf's theory as an hypothesis, capable of being proven empirically (note my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity"). He explains:

> This whole way of approaching Whorf's thesis is, I think, misconceived and arises from a failure to understand the essentially metaphysical character of Whorf's thesis.... It is in the very nature of his thesis that when he speaks of the thought or the world view of a people, he means by these words what he also calls "the basic postulates of an unformulated philosophy" [Whorf, 1950, 61] and "the metaphysics underlying our own language" [Whorf, 1950, 59]. Only if we understand Whorf in this way can we see why he would think that when two languages have been shown to differ in certain ways, no further evidence is needed to demonstrate that those who speak these languages think differently, have different forms of thought. (Cook, 1978, 12)

Both Cook and I believe that Whorf's theory is a philosophical metaphysical theory which relies upon *a priori* beliefs about the nature of language and its relation with the world. It is not a scientific theory (an hypothesis) provable by empirical methods. As Cook notes:

> ...if Whorf really had been...advancing an hypothesis about a contingent relation between thought and language, and if...he constantly fails to cite any (extra-linguistic) evidence to support the hypothesis, it would have been utterly mysterious that Whorf, lacking any evidence for it, should have hit upon the idea in the first place and have become convinced of its truth. (Cook, 1978, 13)

In accordance with my interpretation, and particularly with my discussion about Haugen's objection in §2.3.7 (Argument #7: "Differences in cognition do not follow from differences in language..."), Cook agrees that critics who demand empirical evidence of cognitive differences "which can be observed independently of the difference in language" are simply working within a false interpretation of Whorf (Cook, 1978, 11).

Cook makes another valid point about the nature of Whorf's theory, and Whorf's methods of presentation. He says:

> Those of Whorf's critics who complain that in his examples he presents only the linguistic material and never any evidence that the alleged "thought" occurs have seriously misunderstood how Whorf uses examples. They assume that the role of the examples in Whorf's essays is to demonstrate that language shapes thinking. But this is not...the role of Whorf's examples. When used to illustrate linguistic relativism, his examples were not meant to demonstrate the claim that grammar shapes thinking, for Whorf believed...that he had *a priori* grounds for that claim and needed no evidence to support it. Instead, his examples are meant to demonstrate *what* can be "read off" from the grammar of a language. (Cook, 1978, 20)

Indeed, Whorf believes it to be a self-evident fact (upon reflection) that grammar and "metaphysics" are intertwined, and that you can know about one from the other (note my "Principle of Interpretation #3").

3.7 Attempts to Prove "Whorf's Linguistic Relativity"

In addition to Whorf's non-empirical theory of linguistic relativity (as I interpret it), there is a different thesis which is empirical in nature. Like Whorf's theory, such a thesis involves the claim that there is a relationship between language and thought, but unlike Whorf, various people have tried to verify or to disprove this thesis through empirical investigation, sometimes thinking that they were verifying or disproving Whorf's theory.

One of the more famous investigations is reported by Kay and Kempton, and it describes two experiments (referred to as "Experiment I" and "Experiment II") that were conducted with colours to try to find empirical evidence of linguistic relativity (Kay and Kempton, 1983). The subjects in the experiments had either English or Tarahumara (an Uto-Aztecan language of northern Mexico) as their native tongue; the relevant difference between the two languages, for the purposes of the experiments, is that, in English, there are two words to distinguish blue and green, but in Tarahumara, there is only one word for both colours (Kay and Kempton, 5).

In Experiment I, three colours were shown to the subjects (and the subjects apparently all had perfect colour-vision), one colour was definitely green (I'll call it 'A'), one definitely blue (which I'll call 'C'), and the third was a blue-green (or green-blue) (call it 'B'). The subjects were then asked whether 'B' was closer in colour to 'A' or to 'C' (Kay and Kempton, 5-6). Kay and Kempton maintain that the English speakers, because they have a different word for both colours, unconsciously interpreted their task as to decide whether 'B' was green or blue, and thus to determine if it was closer to 'A' or to 'C' (Kay and Kempton, 15-16). The Tarahumara speakers had no such lexical difficulties, and merely assessed 'B' on the basis of whether it looked more like 'A' or 'C' (Kay and Kempton, 15-16). The results of Experiment I, claim Kay and Kempton, show that English speakers tended to exaggerate the closeness of 'B' to either 'A' or 'C', presumably due to the existence of two words for the different colours, whereas the Tarahumara speakers gave more accurate assessments of where 'B' belonged in the colour scheme (Kay and Kempton, 15-16). Therefore, conclude the experimenters, Experiment I "shows a Whorfian effect," namely, that the English speakers' behaviour in the experiment (i.e., their choices) seem to have been guided by the lexical division between green and blue (i.e., they looked at 'B' as *either* green or blue, as though they had to choose between two segments of the spectrum), whereas the Tarahumara speakers' choices seem to have been based on the more accurate placing of a colour within one segment of the spectrum (and not two) (Kay and Kempton, 15-16).

In Experiment II, a slight difference was made in the subjects' instructions, and they were actually told that 'B' is greener than 'C', and that it was also bluer than 'A', and then asked which one it was closer to. Apparently, because 'B' had, in essence, been named both blue and green, the English speakers did not have to rely on words (i.e. language), but merely had to rely on visual data to determine which one 'B' was closer to, and in the results, the exaggeration that had been evident among English speakers in Experiment I disappeared, and again, no such discrepancies occurred for the Tarahumara speakers (Kay and Kempton, 17-18).

Kay and Kempton claim that the above experiments provide evidence for what they call a "Whorfian effect," viz., that language influences thought. But matters do not really seem to be so clear. What their experiments seem to show is that the English speakers judged certain colours differently from the Tarahumara speakers, which *may* be a result of their different languages. Kay and Kempton claim that the English speakers categorised colour 'B' in Experiment I based on the linguistic necessity of distinguishing between two separate colours. However, they don't seem to have any evidence for their claim that the English speakers were trying to classify the colour as either "green" or "blue" and not simply looking at it as one segment of the spectrum, as the Tarahumara speakers apparently were. The main problem of interpretation is that there is no way to determine exactly what another person is thinking; thus, it seems impossible to experimentally demonstrate Whorf's theory, if what the research is intended to show is that different things are going on in people's minds.

Another experiment, reported by Heinz P. Walz, claims to provide some proof that our grammatical patterns influence thought. Although Walz is hesitant to jump to any conclusions, the results of his experiment are as follows: sentences in English and in German were played to a fully bilingual native German speaker while his brain waves were being monitored; it was found that the German sentences, with their more difficult and complex grammatical structure, elicited greater brain activity (even in a native speaker) than the less complicated English sentences (note that the *content* of the sentences was the same) (Walz,110).[6] These findings *may* indicate that hearing the German sentences required the subject to think differently from the way he thought upon hearing the English sentences, which may imply that thought processes are, indeed, influenced by different grammatical structures.

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[6] Of course, Walz's experiment ignores, or even goes against, Whorf's claim that all European languages (SAE), inlcuding German and English, have the same underlying patterns.

Walz also provides some interesting data about grammar. Apparently, although almost all language behaviour, including semantics, reading, writing and verbal cognition, "can suffer considerable impairment" as a result of various pathological conditions, grammar seems to be immune to such problems. Walz claims that grammar seems to develop in the brain prior to the other language features, and due to its being firmly consolidated in one's mind at an early age, and to its inviolate and immutable nature, grammar continues to "condition" a subject's language "in one strictly limited way throughout his life" (Walz, 115). Walz has admittedly sprinkled his data with speculation, but such research, even in its preliminary stages, at least attributes to grammar considerable influence in the way we use language. Whether that can be extended to the way we *think* is certainly inconclusive, although Whorf would say that the connection is inevitable, even if it can't be proven empirically.

Hill and Mannheim note the difficultly, or impossibility, in trying to prove Whorf's theory, and they come to a conclusion similar to mine, namely, that the "linguistic relativity" espoused by Whorf "is not [an] hypothesis in the traditional sense, but an axiom, a part of the initial epistemology and methodology of the linguistic anthropologist" (Hill and Mannheim, 383). They maintain that, for Whorf, "linguistic relativity" is a "working assumption" which "can only be judged on the basis of the extent to which it leads to provocative questions about talk and social action..., not by canons of falsifiability" (Hill and Mannheim, 386). Although Hill and

Mannheim do not discuss the metaphysical aspects of Whorf's theory, they do recognize the philosophical nature of his theory's *a priori* premises.

3.8 More on Empty Gasoline Drums

Derek Edwards notes that some critics reject Whorf's empty gasoline drum example as a supposed example of linguistic relativity. To recount, as I mentioned in §1.2, Whorf discusses a situation in which gasoline drums are labelled either "gasoline drums" or "empty gasoline drums." He maintains that people tend to behave with care around them if they are labelled with the former designation, believing the gasoline within to be hazardous. However, if the drums are labelled "empty," people tend to behave carelessly around them, even smoking cigarettes and tossing the butts nearby, mistaking "empty" to mean that the potential for hazard is absent, not realising that there may be highly explosive vapours remaining in the drums. Whorf concludes that this is an instance in which language use has an impact on the thoughts, and thus the behaviours, of individuals (Whorf, 1941b, 135).

Edwards says that some critics maintain that empty gasoline drums *could be* referred to as "filled with explosive vapour;" thus, say the critics, with regards to whomever tosses cigarettes into them, "the culprit's error was probably cognitive in origin, not linguistic" (Edwards, 216). However, Edwards comes to Whorf's defense, and he reminds us that:

> [Whorf] does not claim that the drums HAD TO be described as empty, or COULD NOT have been otherwise described, but that this is how they WERE described, and moreover, how they were habitually described. What [Whorf] is discussing in this example are the effects of conventional and situated naming practices (the "description commonly applied to the situation": Whorf, [1941b]: 135), and not the cognitive structure of semantic systems. (Edwards, 216)

Edwards statements correspond to parts of my discussion in §1.2, with reference to Whorf's belief that it is in "habitual thought" that linguistic relativity is most manifest. Indeed, the essay in which Whorf discusses the empty gasoline drum example is entitled "The Relation of Habitual Thought and Behaviour to Language."

Edwards goes on to note that within the context of Whorf's examples, "we can assume that issues of blame, culpability and accident are important.... Whorf provides no detailed ethnography, but describing the drums as EMPTY might well provide for an actor's accountability, in...causing a fire" (Edwards, 216). Edwards point is that words can carry with them certain connotations which can be very powerful in affecting our behaviour and attitudes.

This point is also made by Hill in her discussion of Whorf's empty gasoline drum example, and she asserts that:

> Whorf's examples of the power of labels to affect behaviour... remain convincing. The structures of discourse characteristics of our native language constrain our ability to comprehend text. (Hill, 31)

Although Hill would deny that Whorf's gasoline drum example is empirical proof of his theory (for as noted in §3.7, she claims that such proof is not possible (Hill and Mannheim, 386)), she would certainly agree that it illustrates the fact that the language one speaks, and one's understanding of that language at the time one speaks it, can have an influence on the way one thinks, and thus behaves.

3.9 Closing Remarks

In the preceding discussion, I hope to have shown that there are other writers who, like myself, believe that there are some interesting and valid ideas in Whorf's work worthy of consideration. I have presented people who are sympathetic to my view that much of the criticism of Whorf is based upon faulty interpretations of his theory; as I also discussed in Chapter 2, when Whorf's theory is understood along the lines of my interpretation, many of its alleged problems are invalidated. To demonstrate that I am not alone in my analysis, I have also presented some writers who share my less typical interpretations of Whorf. In the next chapter, I shall take a look at some of the recent work done on the question of linguistic relativity.

Chapter 4

Recent Work on the Question of Linguistic Relativity

In this chapter, I shall examine some of the more recent work on the issues surrounding the possibility of linguistic relativity. I shall point out how the various studies are similar to or different from Whorf's project, and in which ways they extend Whorf's work.

4.1 Some of the Latest Research

A recent anthology, entitled *Rethinking Linguistic Relativity* (Gumperz and Levinson, 1996), examines, in a generally positive light, some of the ideas directly attributable to Whorf. The essays in the book do not always focus exclusively on Whorf, but the Introduction duly notes that the idea of "linguistic relativity" (and even the very phrase) achieved its notoriety through Whorf. The authors of the essays provide thoughtful discussions and new theories to add to the ideas Whorf provided many years earlier. They may not wish to say that Whorf was entirely correct in every aspect of his theory, but they certainly think that he was onto something. It is that "something" that these authors wish to explore, and their essays illustrate the fact that the linguistic relativity issue, and many of Whorf's ideas in general, are alive and well. I will examine and discuss three of these essays.

4.1.1 "Discursive Relativity"

In his essay, "The Scope of Linguistic Relativity," John Lucy maintains that there is another type of linguistic relativity that deserves attention in addition to Whorf's more "metaphysical" linguistic relativity. In accordance with Whorf (note my discussion in §1.5 "The Role of Culture in Whorf's Views"), Lucy places an emphasis on culture. He says:

> Understanding the cultural uses of language is essential not only for assessing the particular significance of given structural effects both within and across cultures but also for assessing the general significance of language in social and psychological life. (Lucy, 1996, 37-38)

Whereas Whorf is mainly concerned with understanding the cultural uses of language "for assessing the particular significance of given structural effects," as Lucy calls it, Lucy wants to extend his own analysis to "assessing the...significance of language in *social* and *psychological* life" (Lucy, 1996, 37-38, my emphasis). Lucy refers to this latter type of analysis as an "hypothesis of discursive relativity," which he describes as: "a relativity stemming from diversity in the *functional* (or goal-oriented) configuration of language means in the course of (inter)action" (Lucy, 1996, 52, emphasis in the original). This includes differences in language usages associated with "subgroups in the language community" (e.g., such things as social dialects reflecting class), as well as differences in contexts of speaking (e.g., formal or informal contexts) (Lucy, 1996, 52). Lucy cites some of the work done in anthropological linguistics, psycholinguistics, and sociolinguistics which encompasses various aspects of "discursive relativity." He claims that, "[t]here is now a significant body of research indicating that there is in fact substantial cultural diversity in the uses and valuations of language" (Lucy, 1996, 53).

One of the specific examples of discursive relativity discussed by Lucy regards "referential uses of language." Research has apparently shown that children only develop scientific concepts within an institutional structure (i.e. formal schooling). Children learn such concepts, it is claimed, "by explicit verbal definition and use, that is, within a context of conscious voluntary manipulation of the linguistic code structure" (Lucy, 1996, 56). Learned scientific concepts then interact with the children's own spontaneous concepts, at which point a final phase of development is reached and "children gain conscious control over their own concepts and thinking" (Lucy, 1996, 56). Lucy further explains:

> Thus, this final phase of development depends for its emergence on the specific verbal practices associated with formal schooling. In essence, a new functional demand from the social arena promotes a major structural reorganisation of individual thought. This development depends on the socially and historically specific practices associated with schooling. Schooled children become aware that word meanings relate to one another as elements of structured systems and derive a portion of their meaning from their place in such systems. Once cognizant of this aspect of language, children can exploit more of the latent power of language as an instrument of thought. (Lucy, 1996, 56)

I assume that as children grow up, they retain this "conscious control" over their thoughts. Relativity comes into play because presumably, the particular social and historical practices associated with schooling will vary across different communities and cultures, and will be reflected in the specialised scientific languages learned by children. Relativity may also stem from the ways the children's newly acquired scientific concepts interact with their spontaneous concepts; for while Lucy does not explain what "spontaneous concepts" may be, perhaps they, too, may differ across cultures, communities, etc. Even if children learn the same scientific concepts, they may be interacting with different spontaneous concepts, resulting in different "structural reorganisations of individual thought."

Lucy does not explicitly indicate whether these different "structural reorganisations of individual thought" result in differences in the "metaphysical" views with which Whorf was primarily concerned. If the ways children organise their thoughts are influenced by the scientific concepts they learn at school, and if those scientific concepts vary in their perspectives upon the world, then it may be the case that a picture of truly Whorfian relativity may emerge. That is, the results of this type of study would be applicable to Whorf's theory of relativity if it is conducted across cultures (or, to a lesser degree, across communities within a culture) in which the respective scientific practices are based on very different perspectives upon the world. As Whorf notes, "every well-knit technical sublanguage [i.e. scientific language] incorporates certain points of view," thus, for Whorf, learning the concepts espoused by these scientific languages would result in different ways of looking at the objective world (Whorf, 1942, 247). However, Lucy does not indicate in which cultures this research was done.

Another specific example of "discursive relativity" regards the "expressive uses of language." Lucy discusses the public oratory habits of the Ilongot people in the Philippines. Ilongot oratory "makes extensive use of a culturally recognised mode of speech which...translates as 'crooked speech'," which is characterised by its lack of clarity in direction and intent, although it sounds clever and witty (Lucy, 1996, 57-58). Such speech is not, however, meant to promote deception or deviousness; rather, it is claimed that it reflects an egalitarian view of others, that people are individuals, and that there is no straightforward path to truth, understanding, and justice (Lucy, 1996, 58). "Straight speech," on the other hand, is more straightforward, plain-talk, and involves the recognition of an authority, and the imposing of organisation and direction on society (Lucy, 1996, 58). Some of the new breed of politicians in the Philippines are adopting the more straightforward style of speaking. Lucy maintains that "expressive values of speech are rather consciously deployed in a way that both reflects and constitutes a certain attitude towards social reality," and so people hearing the two different styles of speaking will apparently be affected in different ways (Lucy, 1996, 58).

I do not think that the Ilongot are unique in the fact that their public officials may speak in such a way as to influence the people, whether their talk makes people feel equal yet individual, or if it makes them feel like subjects to be ruled. I think many people may play with words in order to get various messages across to their listeners, with good or bad ulterior motives. This may, indeed, have some influence on people's perceived "social realities" if they are made to feel equal by some, but subordinate by others, or whatever the case may be.

Research such as the Ilongot study goes beyond the primary scope of Whorf's work. People's perspectives on their place in society has little to do with Whorf's linguistic relativity, which is concerned with "metaphysical" perspectives, i.e., how we organise our experiences of the objective world (note my "Principle of Interpretation #3). Furthermore, the relativity of social perspective that may be illustrated by the Ilongot case occurs within one single language, and not across languages, the latter of which was also one of Whorf's primary concerns. Whorf *does* allow for some differences in perspective *within* a language (see particularly my discussion in §2.3.5 "Objection #5: Differences in perception are found in one language..."), but again, his main concern is "metaphysical" perspective.

Nonetheless, studies such as the Ilongot case are interesting, even if they are not truly Whorfian in nature; for anything that can provide some insight into human interaction is a worthwhile endeavour.

4.1.2 "Thinking for Speaking"

In his essay, "From 'Thought and Language' to 'Thinking for Speaking'," Dan Slobin presents a discussion of linguistic relativity which he claims deviates somewhat from Whorf's theory, but maintains the stance that some form of relativity exists across languages. Slobin proposes to replace the abstract terms "thought" and "language," with which he says Whorf is primarily concerned, with the activity terms "thinking" and "speaking" (Slobin, 71). His aim is to focus attention on the "kinds of mental processes that occur during the formulation of an utterance" (Slobin, 71). Slobin believes that the problems with Whorf's view of linguistic relativity is that he was trying to relate language to "world view" or to "habitual thought." Problems arise, Slobin says, when one tries to define "thought" and "world view," or when one tries "to determine the mental structures that underlie perception, reasoning, and habitual behaviour – as measured outside the contexts of verbal behaviour" (Slobin, 75). Slobin wishes to extrapolate the impact of language patterns upon cognition through the quite observable phenomenon of speaking, believing that our speaking habits are reflective of certain mental processes.

Slobin claims that "much of grammar does not deal with mental images or perceivable reality" (Slobin, 74). He says:

> The world does not present "events" and "situations" to be encoded in language. Rather, experiences are filtered through language into verbalised events. A "verbalised event" is constructed on-line, in the process of speaking... [The] obligatory grammatical categories of a language play a role in [the] construction [of verbalised

> events]. (Slobin, 75)

In the last sentence in the above quotation, Slobin seems to be pointing out the obvious by saying that when we speak, we choose (perhaps unconsciously) our words and syntax according to (or even determined by) the grammatical categories of our language. For, of course, if we verbalised our experiences in a way other than by the conventions of our grammar, we may risk not being understood.

Slobin explains what he calls "thinking for speaking," which he describes as "the expression of experience in linguistic terms"–a "special form of thought that is mobilised for communication" (Slobin, 76). He maintains that:

> "thinking for speaking" involves picking those characteristics of objects and events that (a) fit some conceptualisation of the event, and (b) are readily encodable in the language. (Slobin, 76)

Furthermore, he claims that when children acquire a native language, they learn "particular ways of thinking for speaking" (Slobin, 76). Slobin's description of "thinking for speaking" differs from Whorf's idea of linguistic relativity in that Slobin is not making any claims about how language patterns relate to thought in general, rather, he is merely claiming that the way we think when we formulate speech is guided by the patterns of our language.

Slobin attempts to support his claims through research done with people (ages 3-5, 9, and adults) of various native languages (English, German, Spanish and Hebrew), in which the subjects were asked to describe the events in pictures taken from a children's storybook. The research indicates that expressions of temporal and spatial relations differ across languages, thus providing, says Slobin, evidence of language-specific patterns of thinking for speaking, that is, there is "different on-line organization of the flow of information and attention to the particular details that receive linguistic expression" (Slobin,77- 78).

For example, Slobin's research compared grammatical aspect across the four languages in the study: Hebrew has no grammatical aspect; German has perfect; English has perfect and progressive; and Spanish has perfect, progressive, and imperfective/perfective. When the subjects described the pictures, it was found that the majority of them, particularly the 9-year-olds (possibly due to the immediate effects of schooling), tended to express categories that are grammaticised in their native language, and to ignore those that are not. Only rarely did the subjects try to elaborate aspectual distinctions not found in their grammar, or to ignore existing distinctions. But, he claims, the fact that some *did* elaborate such distinctions shows that grammatical categories, although they may play a *large* role in "thinking for speaking" are not, to use Slobin's term, "a Whorfian straightjacket" (Slobin, 79-83, 86). It is, of course, a misrepresentation of Whorf's theory to suggest that he believed grammatical categories to be a "straightjacket," unless one also claims that Whorf believed each language speaker to be a potential Houdini (note especially my discussion in §1.2 and 2.3.1 "Objection #1: If Whorf was right about linguistic relativity, then he could not have discovered its existence").

Slobin is convinced that the findings of his study indicate that our language "affects the way we think while we are speaking" (Slobin, 91). He chooses not to consider whether our language affects the way we think, period, for he believes such a stand to be wrought with problems. However, it is not readily apparent how Slobin's limiting the effects of language to "thinking for speaking" is immune to the types of problems he says arise when discussing other forms of thought such as perception, reasoning, and habitual thought. It is unclear how he can make claims about one form of thought when he says that it is impossible, or extremely difficult, to make claims about other forms of thought. Perhaps he is inextricably tying the "special form of thought that is mobilised for communication" to verbal utterances themselves, simply believing that the former can be "read off" the latter in much the same way that Whorf believes that a "metaphysics" can be read off a language. That is, for Whorf, it is an *a priori* truth that the language one speaks provides one with a certain "metaphysics" (i.e., world-view), for the two are inseparably intertwined (note my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity" and see my discussions in §1.3 and 3.2).

Although Slobin claims to be deviating from Whorf's theory, there are places in Whorf's work in which he describes almost exactly the same thing as Slobin. In his essay "Linguistics as an Exact Science," Whorf makes the point that, in the sciences, it is not so much the way scientists "think" about the phenomena they study, rather, it is in the way they "talk" about it, i.e., how they put it into words, that is important. Whorf says that it is in the habitual use of language, *usually while we are speaking*, that relativity across languages is most manifest, for speakers are often unconscious of the grammatical structures underlying their words (Whorf, 1940b, 221). Although Slobin may not wish to make *all* the claims Whorf makes about the relationship of language to thought, he does remain quite faithful, whether he realises it or not, at least to a *part* of Whorf's theory.

Another aspect of Whorf's theory with which Slobin agrees is that objective reality–the world itself–is not relative (note my "Principle of Interpretation #5: Whorf is a Realist about the World" and see §3.5). Slobin states that, in his study, there is nothing in the pictures themselves that lead speakers of different languages to describe them differently, rather, the different descriptions stem (so he claims) from the different grammatical structures of each language in question (Slobin, 90). Whorf would say very much the same thing–that it is not the world itself that leads people of different languages to perceive (and thus to describe) it differently, rather, different perceptions stem from the grammatical structures of different languages–but his analysis would extend further than merely to how we think while speaking.

4.1.3 Other Manifestations of Linguistic Relativity

John Gumperz, in his essay, "The Linguistic and Cultural Relativity of Conversational Inference," notes that it is generally accepted that propositional content and grammar are "not the sole determinants of meaning assessments" (Gumperz, 374). Rather, he says, "discourse-level characteristics of verbal signs and culturally specific background knowledge, along with generalised world knowledge, also play a significant role" (Gumperz, 374). His point is that the study of the possibility of linguistic relativity should not analyse purely linguistic factors alone, but should also consider cultural and contextual factors as an influence on language habits. It is not clear whether Gumperz intends his analysis to differ from Whorf's in these general respects, but as I noted in §4.1.1, Whorf also considers cultural influences to be an important element in his theory of linguistic relativity (also see §1.5). Furthermore,Whorf believes that the context in which language is used, as well as people's general knowledge of language, affects how people perceive a situation, and thus both notions of context and general knowledge play a role in his theory of linguistic relativity (note especially Whorf's empty gasoline drum example, and my discussion of it in §1.2 and 3.8).

Nevertheless, Gumperz asks, and attempts to answer, a set of questions:

> [T]o what extent are the discursive processes, by which interpretive frames are invoked and shared interpretations negotiated, themselves linguistically and culturally variable? How is this variability distributed among human populations and how does it affect the way we view the relativity debate? (Gumperz, 374).

His focus is on discursive practice "as an interactive and basically social process, involving co-operation on the part of more than one person" (Gumperz, 374). He notes that when there is intensive communication among individuals, "bound by ties of mutual trust and support... and by cooperation in the pursuit of occupational goals," there is likely to be "locally specific interpretive and communicative conventions" (Gumperz, 376).

Gumperz discusses the phenomenon of multiculturalism, in which people of many diverse linguistic and ethnic/cultural backgrounds come to live in the same locality. He argues that even if these people try to preserve their heritage, at some point they must interact with the "public sphere." When this happens, "linguistic diffusion" takes place, which Gumperz describes as the development of new speaking genres, based on the speakers' original languages, but nonetheless different. A result of this diffusion is that "speakers of the same languages may find themselves separated by deep cultural gaps, while others who speak grammatically distinct languages share the same culture" (Gumperz, 377). Presumably, Gumperz is claiming that the discursive practices adopted (or assimilated) by the newer inhabitants of a locality reflect the preexisting discursive practices within the local culture, and a set of inferences and understandings is derivable from these discursive practices that is not available to speakers of the original undiffused language. Presumably also, the discursive practices of the local speakers may be altered by the infusion of new language speakers.

Gumperz provides some examples to show that the inference of a word differs depending on context, e.g., he quotes part of a speech given by an African American political leader during the Vietnam war. In his example, the speaker first says that he, and his supporters, will not "kill" other people of colour. The speaker then says that he (and his supporters) will "kill" Richard Nixon. Within the context of his speech, Gumperz says that it should be clear to the audience, providing they understand the context, that the speaker meant "kill" in the sense of "taking a life" in his first statement, whereas in his second statement he meant something like, "destroy Nixon's influence" (Gumperz, 381-2). However, I think that this may not be "clear" to all members of an audience, and perhaps someone who is unaware of the different meanings attached to "kill" may seriously misinterpret the speaker's statement, possibly thinking of "kill" in the "taking a life" sense with regards to Nixon.

Gumperz's example is somewhat similar to Whorf's example of the empty gasoline drums (as discussed in §1.2 and 3.8), in which Whorf notes that "empty" has somewhat different meanings depending on the context in which it is used: in the context of gasoline drums, "empty" may not mean "completely devoid of substance," rather, it may well mean that although the liquid gasoline is absent, harmful vapours may persist. It depends on the knowledge and understanding of the individuals hearing the word as to what further information is considered in the processing of its meaning (Whorf, 1941b, 135). Of course, misunderstanding occurs frequently for this very reason; people are not always aware of the precise meaning to be placed on the words they hear.

Gumperz maintains that the meaning of a word "shifts with context," and "unlike grammar, knowledge of contextualisation conventions is not shared by all speakers of a language" (Gumperz,382). Although Whorf places the greatest emphasis on grammatical constructs as the manifestation of linguistic relativity, it is clear that he also allows for relativity from the use of individual words or phrases (see above, and §1.2, 3.8). Depending on the context they attach to a particular word, people do seem to "think" about it differently, for to process the word "kill" as "taking a life" is a very different thought from processing it as "destroying someone's influence."

Furthermore, thoughts about what a word means will have an impact on behaviour, for just as in Whorf's example in which those ignorant of the inferences of "empty" carelessly tossed cigarettes about in the vicinity of gasoline drums (Whorf, 1941b, 135, and see §3.8), one's behaviour may vary depending on the meaning one attaches to a particular word. In Gumperz's example, it is not incomprehensible that one of the speaker's listeners would try to assassinate Nixon, believing that to be the message and thus the desire of the speaker. There is also the possibility that the speaker may have been counting on such a misunderstanding, for it is entirely conceivable that some people may use words to influence other people's behaviour; an ambiguous word like "kill" may be spoken with mock innocence, barely concealing the ulterior motive of hoping a zealot will misunderstand the connotations and behave rashly.

Gumperz describes the thought processes involved with contextualisation, and says:

> ...inferring...involves a two-step process in which the contextual ground, in terms of which an assessment of what is perceived is made, must first be retrieved and related to stored memories before an interpretation is arrived at. Contextualisation cues channel the inferential processes that make available for interpretation knowledge of social and physical worlds. (Gumperz, 383).

Contextualisation is not, however, readily learned, for Gumperz maintains that whereas most children almost completely acquire a first language by the age of five, including its grammatical conventions, "the learning of contextualisation conventions continues throughout the life-cycle as a function of the network-specific practices into which a speaker enters" (Gumperz, 383).

While Whorf believed that all facets of a language–perhaps of all languages–could be learned, possibly resulting in the brotherhood of humanity (note §1.4, 3.3), Gumperz's remarks seem to indicate that even within an entire lifetime, one may not learn every nuance of one's native language, let alone other languages. If Gumperz is correct, there could be a nearly infinite number of contextual variations within a single language. Thus, Whorf's utopian idea certainly seems insurmountable considering both our limited life-spans and the fact that most people are busy doing things other than studying languages. Furthermore, on Gumperz's assessment, contextualisation conventions are not generally learned through direct instruction, but primarily through "socialisation in family or friendship circles or intensive communicative co-operation in a...range of institutionalized environments" (Gumperz, 383). Chances are, there would be no way for an "outsider" to learn many linguistic conventions without direct, and perhaps prolonged, contact with all of those who use them, and such a feat is surely impossible.

As noted with reference to Lucy's essay (§4.1.1), Gumperz's analysis goes somewhat beyond the scope of Whorf's linguistic relativity theory, for Whorf is mainly concerned with the ways people experience and perceive the objective world, and not with the ways they experience and perceive social situations.

4.2 Feminist Approaches to Linguistic Relativity

I shall now look at two essays which provide a feminist perspective on linguistic relativity. The first provides an emotionally-charged account of how language supposedly perpetuates male-domination, while the second discusses a study of the possible effects of masculine pronouns on thought.

4.2.1 A Radical Feminist Viewpoint

In her essay, "Defining Reality: A Powerful Tool," Dale Spender takes a radical feminist stance on the relationship between language and society. She presents the notion that language plays a part in creating a world view. In setting the stage for her thesis, she poses the assumption that, "language is a means of organising and structuring the world...[,it] is a means of symbolising and representing experience, and...it is the vehicle for constructing reality" (Spender, 194). She begins by saying that, "too little attention has been paid to the role of language in the construction of inequality" (Spender, 194). The aim of her essay is to:

> ...consider how some people affect others through the means of organising and structuring the world, through symbolising and representing experience, through the construction of reality. (Spender, 195)

Spender's primary claim is that there exists a "male-dominated society" which negates the experience of women (Spender, 195). She maintains that the English language itself was created by men (surely a questionable claim), and because the language negates women's experience, so do the "codified bodies of knowledge" designated by the words and meanings of the English language (e.g., she says, "patterns comparable to those manifested in the language" appear in "knowledge" of such disciplines as anthropology, history, philosophy, psychology, and sociology) (Spender, 196, 197). Indeed, in much anthropological field research, according to Spender, it is primarily the males who are consulted in ethnographic studies, thus providing a biased view of the culture in question (Spender, 196).[7] She maintains that "the limited experience of one sex has been legitimated as the complete human experience," thus the "experience of those who dominate, of those who have power [i.e. the men], dominates" (Spender, 198).

How women's experiences of the world differ from men's, claims Spender, is that, not only are women biologically different, but they have the experience of "having one's life constantly negated... [and] being permanently, ...by definition, in the wrong" (Spender, 198). Both men and women, claims Spender, "generate models of the world," but when a discrepancy arises between the two, it is the meaning of the male-generated model that is legitimated (Spender, 199). Thus, says Spender, males "have the capacity to produce an intended effect on the symbolising and structuring activities" of women, for women are forced to conform to male standards of meaning in order to be legitimated. Spender maintains that:

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[7] Spender says that this finding is discussed in the anthology *Perceiving Women* edited by Shirley Ardener, London: Malaby, 1975.

> [B]y such means is sexual inequality constructed, reinforced, and perpetuated... The exclusion of women is structural; the negation of their experience is probably the inevitable outcome of such a structure. No matter what women do or say, no matter how they represent their experience, in these terms, if it is not also the experience of men, it will be consigned to the realm of nondata. (Spender, 199)

One result of linguistic and cultural meanings being male-dominated– an "outcome of a structure that permits only one perceptual order"–says Spender, is that women may construct and become convinced of their inequality and dependence on men (Spender, 200-202).

In her final remarks, Spender notes that it is not merely women who are marginalized by the language-created male domination of society, but also non-white people, the working-class, homosexuals, and the physically or mentally disabled (Spender, 203). Therefore, it seems, according to Spender, that only a small collection of men (middle-aged, higher-income, white males, perhaps) are responsible for the creation of the language in the first place, and the following perpetuation of discrimination through its usage.

It is Spender's ultimate claim that "those who are the legitimators [of meaning] have...only a partial view of the world" (Spender, 203). Her solution is that everyone's experiences and applications of meaning should coexist, and that no-one should have "their [experiences] circumscribed by the experience[s] of the other[s]" (Spender, 203). Although Whorf's notion of world-view differs from that of Spender, for his concerns the ways people perceive *objective* reality, whereas Spender's primarily concerns *social* reality, he nevertheless makes analogous comments. For example, consider Whorf's statement that:

> Every language and every well-knit technical sublanguage incorporates certain points of view and certain *patterned resistances to widely divergent points of view*. (Whorf, 1942, 247, my emphasis)

As well, he says:

> One significant contribution to science from the linguistic point of view may be the greater development of our sense of perspective. We shall no longer be able to see a few recent dialects of the Indo-European family, and the rationalising techniques elaborated from their patterns, as the apex of the evolution of the human mind.... They, and our own thought processes with them, can no longer be envisioned as spanning the gamut of reason and knowledge but only as one constellation in a galactic expanse. (Whorf, 1940c, 218)

For Whorf, it is only when the perspectives (experiences, etc.) of all people are combined that a full (or fuller) world-view–a fuller picture of reality–will be evident (note my Principle of Interpretation #4: Metaphysical Hierarchies" and see §1.4, 1.6).

Spender's essay, like much of Whorf's work, tends to rely heavily on assumption. She obviously strongly believes that language influences the way people perceive the world, at least the social world, and she provides what she presumably takes to be clear illustrations of this fact, in the form of examples of men's supposed domination over women. Whorf does not address the issue of a relativity of a *social* world-view within one language, based on inherently biased linguistic practices, as Spender does, rather, Whorf's comments generally apply to the existence of relativity across languages, and are concerned with the experience of objective reality. Nonetheless, there are certainly parallels in the structure of their arguments, even if they are arguing about different things. However, it is not inconceivable, as noted in Lucy's essay in particular, that notions of relativity similar to Whorf's can be applied to non-objective situations and experiences. Although Spender may be exaggerating about the extent of male-domination through language practices, her underlying point about the power of language is something that I believe to be both relevant and important to the study of the relationship between language and thought.

4.2.2 A Less-Radical Feminist Viewpoint

In a paper entitled, "Penguins Don't Care, But Women Do: A Social Identity Analysis of a Whorfian Problem," Fatemeh Khosroshahi provides another account of a feminist perspective on linguistic relativity.[6] Khosroshahi notes the claim that the English language, in particular, reflects a "male-as-norm syndrome," in which, in generic contexts, masculine words and pronouns are supposed to include women (Khosroshahi, 506). Masculine words, explains Khosroshahi, are "unmarked," whereas feminine words are "marked," and the latter are used only to describe females (e.g., "actor" can be used for either gender, but "actress" for females only). She says that:

> ...[the] claim that masculine generic words help to perpetuate an androcentric world view assumes more or less explicitly the validity of the Sapir-Whorf hypothesis, according to which the

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[6] To explain briefly the title of Khosroshahi's paper, she notes that, just as most people are more likely to cognitively imagine a male, rather than a female, when coming into contact with "generic" pronouns, so too are people more likely, when confronted with the generic word "bird" to picture an ordinary bird like a sparrow rather than an "atypical" bird such as a penguin. Her point is that penguins will probably not be offended by such a practice, whereas women have every right to be offended by their under-representation in language practices (Khosroshahi, 518).

> structure of the language we speak affects the way we think. (Khosroshahi, 506)[9]

Khosroshahi cautions that empirical tests of linguistic relativity hypotheses have yielded equivocal results (Khosroshahi, 506). However, she notes that there seems to be some empirical evidence that the use of masculine terms in generic contexts are consistently interpreted as referring only to males. For example, in one study, subjects were asked to draw their "conception of what the Neanderthal man looked like," and almost all subjects drew a male, despite "Neanderthal man" supposedly being used generically. It seems unlikely to me, however, that in today's society, "Neanderthal man" is used as a gender-neutral term, for it seems that "man" is seldom used to include both genders (although I speak only from personal experience).

Nonetheless, Khosroshahi reports on the evidence of her own study, in which English-speaking college students (half of whom were male, half female) were given a "comprehension task" in which they were asked to draw their mental imagery relevant to sex-neutral paragraphs they read containing the generic *he*, *he or she*, or singular *they* (Khosroshahi, 510). The test subjects were not told of the purpose of the study. In brief, the results showed that most of the subjects (male and female) drew more male figures for all three pronoun usages, female figures were a distant second, and generic images (in which the subjects refused to identify a gender), were least common. Perhaps as expected, female subjects drew more female figures than did male subjects, but overall females drew more male figures than female figures. Khosroshahi concludes that generic masculine pronouns are, in fact, biased, leading (most) people more often to interpret them as referring to male characters than to female characters (Khosroshahi, 516-517).

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[9] I shall forego lengthy comment on Khosroshahi's use of the term "Sapir-Whorf hypothesis," and her later reference to "Whorf's thesis," as though the two were synonymous (indeed, at one point she uses both terms in the same sentence, without explanation (Khosroshahi, 520)). As I discussed in the Introduction, the "Sapir-Whorf hypothesis" is the name given to a general idea of linguistic relativity as apparently derived (by various commentators) from the (uncollaborative) works of Sapir and Whorf, whereas Whorf's thesis is just Whorf's thesis.

An exception to the above pattern were a few female subjects who normally avoided using masculine pronouns as generic, and in fact favoured using feminine generic pronouns (based on an examination of their previous essay-writing habits); these subjects primarily drew female figures, regardless of the pronoun used (Khosroshahi, 514). The other members of the test-subject group (both males and females) tended to use masculine generic pronouns in their writing (based on previous essay-writing samples). Khosroshahi's experiment included looking at samples of the test-subjects' essay-writing in order to determine if the subjects' usage, in print, of certain generic pronouns matched their tendency to cognitively imagine particular genders when encountering generic pronouns. The purpose was to determine if the subjects' thought (observed as their reactions in identifying the gender of a generic pronoun) corresponded to their language (observed as their usual writing style). She divides both the male subjects and the female subjects into two groups: traditional-language users and reformed-language users, the former favouring masculine generic pronouns while the latter favour feminine generic pronouns, or a mixture of both. Her test results show that the traditional-language males and females in the study are consistent in that they both use primarily masculine generic pronouns in their writing, and they imagined primarily male figures in the "comprehension task" experiment described above. Female reformed-language users, as mentioned, both write using more feminine generic pronouns and they imagined more female figures in the experiment. The only inconsistency was with male reformed-language users, who write using feminine/mixed generic pronouns, yet they imagined primarily male figures when encountering the masculine generic pronouns in the experiment.

While Khosroshahi is unwilling to claim that her experiment shows that there is a "causal" relation between language and thought, she does make the claim that, "differences in language are *correlated* with differences in thought" (with the exception of male reformed-language users) (Khosroshahi, 520, emphasis in original). She calls this the "*weak* form of the Sapir-Whorf hypothesis" (Khosroshahi, 520, emphasis in original). As for what she calls the "strong form" of the hypothesis, that language *causes* certain thought patterns, Khosroshahi mentions that her experiment "does not permit the inference that the reform of women's language necessarily preceded the change in their thinking" (Khosroshahi, 522). Indeed, nor does the experiment show that the linguistic habits of the traditional-language users preceded their androcentric thought biases.

Khosroshahi claims that her experiment is intended to prove some form of "the Whorfian hypothesis." However, based upon my interpretation of Whorf, her analysis and methodology contain several errors, if what she is trying to do is remain faithful to Whorf's project. A minor point is that her research focuses only on one language. However, that alone does not exclude her from the scope of Whorf's analysis, for Whorf does account for relativity *within* a single language (as evidenced by his empty gasoline drum example), although his main concern is with cross-linguistic differences.

Khosroshahi 's first major error, from a Whorfian perspective, is assuming that there are *two* Whorfian hypotheses. As I discussed at length in §2.2, Whorf posited only *one* theory of linguistic relativity which includes varying degrees of influence by our native language (and by other languages) upon our thoughts about the world (and note my "Principles of Interpretation #2,3, and 4"). Thus, her statement that her results support one or the other of a "Whorfian" hypothesis is based upon a misinterpretation of Whorf's theory. Furthermore, her conclusion that there is a "correlation" between language and thought seems rather trivial; indeed, the standard criticism against the so-called "weak Whorfian hypothesis" is that it does not tell us anything interesting (note my discussion of this matter in §2.2).

The second mistake Khosroshahi makes is that she deviates significantly from Whorf's notion of what it is that is affected by linguistic relativity. Whorf's linguistic relativity theory concerns people's "metaphysics," i.e., the different ways that people perceive and categorise their experiences of the *objective* world (note my "Principle of Interpretation #3" and note my discussions in §1.3, 2.3.5, and 4.1.1). Khosroshahi's focus is intended as an analysis to determine people's different perceptions and attitudes towards one another in a *social* setting.

The last error that Khosroshahi makes is her assumption that Whorf's theory is empirical in nature, for she attempts to provide empirical proof for what she takes to be his linguistic relativity "hypothesis." However, Whorf's theory is *not* empirical, for it relies upon the *a priori* assumption that language and "metaphysics" (i.e., world-view) are inseparably bound (note my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity" and see especially §1.3, 2.3.7, 3.2, 3.6).

Therefore, language patterns just do cause certain thought patterns, Whorf would say, because that is the nature of language and thought.

4.3 More Recent Work

I shall now examine two selections of work in which the authors support and to try to verify particular ideas of Whorf. The first examines a small aspect of Whorf's work, and the second is a large-scale case-study attempting to prove the existence of linguistic relativity.

4.3.1 Exploring a "Sublinguistic"

In his essay "Linguistic Relativity Revisited," John Macnamara does not focus on linguistic relativity *per se*, rather, he focuses on the idea that there is a sublinguistic element (or as he calls it, a "sublinguistic," using the word as a noun) common to all people, regardless of the language they speak. Macnamara explains that contemporary linguists, inspired by Noam Chomsky, use the term "universal grammar" for this concept, but that the idea, and the term "sublinguistic," is traceable to Whorf.

Whorf does say that there may be, or must be, a common element shared by all people and which underlies language, for he says:

> ...the tremendous importance of language cannot, in my opinion, be taken to mean that nothing is back of it of the nature of what has traditionally been called 'mind.' My own studies suggest, to me, that language, for all its kingly role, is in some sense a superficial embroidery upon deeper processes of consciousness, which are necessary before any communication, signalling, or symbolism whatsoever ever can occur... (Whorf, 1941a, 239).

Furthermore, and with regards to Macnamara's reference, he says:

> ...different tongues...may generalise down not to any such universal as "Language," but to something better–called "sublinguistic" or "superlinguistic"–and NOT ALTOGETHER

> unlike, even if much unlike, what we now call "mental." This generalisation would not diminish, but would rather increase, the importance of intertongue study for investigation of this realm of truth. (Whorf, 1941a, 239, capitals in the original)

Presumably, linguistic relativity would not occur in the sublinguistic, mental terrain of which Whorf (and Macnamara) speak, for it is assumed to be shared by all people, regardless of their languages. Whorf seems to indicate that to study a variety of different languages may yield the discovery of a particular element common to all, validating the notion of a "sublinguistic."

Macnamara's purpose is to try to show that research has revealed the possibility of a "sublinguistic," thus, he says:

> ...it will...illuminate and greatly strengthen Whorf's fundamental stance about the importance of linguistic studies for the understanding of cognitive states and processes. (Macnamara, 47)

Macnamara admits that his discussion is not meant to judge Whorf's claims about linguistic relativity, but he certainly wishes to validate Whorf's ideas about a "sublinguistic."

In his quest to find evidence of a common universal, Macnamara examines what he refers to as "count nouns" in order to determine if they exist, in some form or another, in all languages. He sets out three rules for what can be classified as a count noun, as follows:

> Rule 1. A count noun is a word that refers to a kind satisfying two conditions:
> a. All of the kind's members are atoms.
> b. The kind supplies a principle of identity for the members...
>
> Rule 2. A word is a count noun if it combines with a mass noun to designate part of the extension of the kind referred to by the mass noun *and* if the combination take quantifiers that presuppose individuation...
>
> Rule 3. A word is a count noun if in the singular form it refers to a kind that consists of numbers of atomic individual

> members in the extension of a prototypical count noun. (Macnamara, 55-56)

Macnamara then qualifies his above "rules" by saying that he is not claiming that they constitute a complete "definition" of the notion of count noun, for he concedes that there may be other "exceptions" that require other rules "for other languages and even for English" (Macnamara, 56-57). His primary claim is that:

> ..the key to all such rules is supplied by the semantic notions of individuation and identity. My conjecture is that these notions constitute the only non-circular guide to solving the question of whether there are count nouns in languages other than English. (Macnamara, 57)

He says that it is then only a matter of determining if there are words in other languages that satisfy the rules (Macnamara, 57).

Macnamara maintains that studies have shown that:

> ...children come to language learning with an unlearned expression (in the language of thought) for the category of count noun together with rules for its application. (Macnamara, 58)

If it is, indeed, the case, that all children–regardless of their language community–have an innate capacity for recognising and using count nouns, then this may be (at least some of) the evidence that Macnamara needs to show that all people share a common "sublinguistic."

Macnamara notes that his essay, with its emphasis on a universal "sublinguistic," supports Whorf's "insistence that the diligent study of grammar [will] yield deep insight into the nature of the human mind" (Macnamara, 58). In this case, Macnamara hopes to have yielded some insight into Whorf's belief in the existence of a "sublinguistic"–a universal quality common to all people.

I think that Whorf would accept Macnamara's approach to a "sublinguistic," for both seem to be convinced that such a thing exists, and that it is only a matter of studying different languages to reveal its precise nature.

4.3.2 A Whorfian-Style Case Study Comparing Yucatec Maya and American English

In his book, *Grammatical Categories and Cognition: A Case Study of the Linguistic Relativity Hypothesis* (1992b), John Lucy reports on his comparative language study which takes, as he claims, a traditionally Whorfian approach to the question of linguistic relativity. Lucy conducted extensive research on:

> ...whether differences in the grammatical treatment of nominal number (for example, pluralization) in Yucatec Maya and American English correspond with detectable differences in habitual thought as assessed through simple cognitive tasks involving attention, memory, and classification. (Lucy, 1992b, 3)

For his research, Lucy examined two groups of men: adult Mayan men (18-45+ years old) from a Yucatan village (all native speakers of Yucatec), and college-aged men from the University of Chicago (all native speakers of English) (Lucy, 1992b, 20, 22).

In Lucy's study, each test-group performed several tasks involving looking at various pictures, some of which tested immediate classification of stimuli, others testing response to stimuli after a time delay. The concern of the test was to determine how the different speakers used "nominal number marking" which Lucy explains as follows:

> Notionally, it involves various indications of multiplicity, number, quantity, or amount of some object of noun phrase reference relative to a predication. Formally, it includes such things as plural inflection, plural concord, and indication of singular or plural by modification of the lexical head of a noun phrase with a numeral or other adjective indicating quantity or specification of amount.

(Lucy, 1992b, 23)

Examples would be things such as "one book," "geese," "those bikes," or any other instances of overt number marking.

Lucy says he chose an examination of nominal number because: a) it is commonly encountered and it is a central noun phrase category; b) the formal patterns have "clear referential value"; and, c) it is "the locus of some of the more striking differences" between English and Yucatec (Lucy, 1992b, 23-24). He explains the latter by claiming that "the languages differ in which elements of structure require obligatory, overt specification [of number marking] and which do not"; this suggests that there are, "some fundamental asymmetries of structure [between English and Yucatec] at the level of lexical nouns" (Lucy, 1992b, 83).

Lucy discriminates between three noun-phrase categories: 1) animate beings and other "self-segmenting entities" (e.g., dogs, cars); 2) "discrete" objects and other "stably segmented entities" (e.g., shovels); and, 3) tangible materials or substances with "malleable form" (e.g., mud) (Lucy, 1992b, 58). He notes that:

> ...the grouping reflects something about the organisation of experience *for the purposes of speech* rather than solely some independent regularity in the world.... [That is], languages (both individually and collectively) construe entities *from the point of view of language as a referential and predicational device* and not solely or consistently in terms of extra-linguistic (or natural) characterisations. (Lucy, 1992b, 58, emphasis in the original).

In other words, he means that the categories are classified according to certain ways that people are inclined to *talk* about entities, and not necessarily according to how entities actually exist in nature.

One specific difference that Lucy notes between English and Yucatec is that, in English, the entities in categories 1 and 2 are obligatorily pluralised, whereas in Yucatec, only the entities in category 1 are obligatorily pluralised (Lucy, 1992b, 61). Another specific difference is that, in Yucatec, obligatory unitisation is required in all three categories (i.e., assigning a particular number or unit to the entity or entities in question), whereas in English, only entities in category 3 require obligatory unitisation (Lucy, 1992b, 77).

The aim of Lucy's study was to test whether "the specific linguistic patterns of Yucatec and English corresponded with observable patterns of individual cognitive performance" (Lucy, 1992b, 156). He had his test subjects look at pictures and then describe what they were looking at. Some of the tests involved immediate descriptions with the pictures present, while others involved removing the pictures and requiring subjects to recall what they had seen.

Lucy's findings indicate that English speakers, more than Yucatec speakers, habitually attended to the number of objects of reference, and for a wider array of referent types (within the three noun-phrase categories mentioned above). As well, English speakers attended more to the shape of objects, while Yucatec speakers attended more to the material composition of objects. Lucy maintains that the behaviour of the participants (through their descriptions of the pictures) reflects the "language-specific patterns of grammatical number markings" (Lucy, 1992b, 156). In other words, the subjects *verbally described* the entities in the pictures according to the categorical grammatical conventions of their respective languages. Furthermore, presumably their verbal descriptions were considered to be accurate reflections of their spontaneous and habitual thought processes.

Lucy is hesitant to announce that his findings have proven a

Whorfian linguistic relativity hypothesis, despite the fact that his study originally set out to try to do just that. He notes that:

> ...it is not possible with correlational techniques to establish unequivocally that language is the shaping factor in [the] relationship [between cognitive performance and linguistic structure]; the language patterns may in fact derive from culturally specific thought patterns, or both patterns may derive from some third cultural factor. But correlational evidence can be extremely suggestive of a causal role for language if the relationships are strong and distinctive and if no other explanation for the contrasting cognitive patterns seems plausible. (Lucy, 1992b, 85)

Lucy's final conclusion, like that of Khosroshahi's (§4.2.2), seems merely to be that there is a *correlation* between language and cognition, rather than a *definite influence* of language *upon* thought.

While Lucy has provided what appears to be solid evidence for a correlation between language and thought, his work is not an accurate reflection of Whorf's views. Whorf *bases* his theory of linguistic relativity upon the *assumption* that language does, in fact, influence thought (note my "Principle of Interpretation #3: Assuming the Truth of Linguistic Relativity" and see especially §1.3, 2.3.7, 3.2, 3.6). For Lucy not to acknowledge this *a priori* premise of Whorf's theory is an interpretive error which misleads Lucy into approaching Whorf's theory as an empirical claim instead of a philosophical one.

4.4 Closing Remarks

Much of the recent research on linguistic relativity endeavours to find empirical proof for its existence. One can understand and sympathise with the aim of such work, for people are obviously hesitant to make claims without scientific evidence to back them up. But such a methodology differs from Whorf's in that he simply assumes that language does influence the way we think about and perceive the world. Whorf, I think, tries to convince people that he is right about linguistic relativity by pointing to certain things and essentially saying: "Look, there's linguistic influence on thought going on right in front of your eyes!" The examples he provides are meant to *reveal* the sorts of differences in perspectives that different languages can offer. If Whorf's theory is as I interpret it, i.e., a "metaphysical" philosophical theory, then it may not be possible to acquire empirical evidence, at least not for all of its many facets.

Some of the individuals who are doing research on linguistic relativity hesitate (or refuse) to assume that language influences thought, and instead provide evidence that shows merely that a correlation exists between the two. Thus, they conclude only that Whorf *may* have been right, since the direction of influence between thought and language is inconclusive from their results. Insofar as such researchers think of themselves as explicating *Whorf's* views, the fact that they are operating outside of the "metaphysical" framework crucial to understanding Whorf's theory misleads them into thinking that they can validate his views empirically.

Other researchers attempt to provide for the existence of linguistic relativity by examining the ways that people within one language community interact in a social environment. They believe that the ways that people use a single language results in varying perspectives upon *social* reality. Such research is extremely interesting, but it does not accurately capture Whorf's primary aim, which is to account for differences in *objective* world-views across different languages.

Nonetheless, I do believe that research on the question of linguistic relativity should be continued, even if it deviates from Whorf's methodology or extends the scope of his work. The possible relationship(s) between language, thought, and the world–including both the *objective* and the subjective, *social* aspects of the world–are certainly worthy of study. Perhaps some of the credit for the continuing interest in such relationships may be given to Whorf, who so enthusiastically discussed them decades ago.

Chapter 5

Conclusion

To the typical philosopher and to scholars in such related fields as anthropology and linguistics, the mention of the name 'Benjamin Whorf" or of Whorfianism brings immediately to mind a doctrine of "linguistic relativity" according to which one's thoughts–indeed, one's ways of "perceiving the world"– are to be explained in terms of the language one speaks. Speakers of different languages "see the world" in different and incommensurable ways. This in turn leads to discussions of "the strong Whorfian hypothesis" versus "the weak Whorfian hypothesis." Many, perhaps most, scholars involved in these discussions think that "the strong hypothesis" is obviously false while "the weak hypothesis" is trivially true and uninteresting. Some of these scholars believe that the "linguistic relativity" that is supposedly inherent in one or the other of the hypotheses leads to "linguistic determinism": the doctrine that one's thought processes are constrained, either completely or partially, by the language one learns as a child. They might even go so far as to call it "the Whorfian straightjacket." Such scholars think that Whorf's frequent citation of the grammatical features of various Native American languages are supposed to provide proof of this doctrine, and some of them are therefore moved to try to show that Whorf was wrong in the details of his analyses of one or another of these languages. Other scholars who discuss the "hypotheses" think that it is an empirical matter whether one of these hypotheses is true, and they set out to investigate other cultures in order to determine its truth.

Such is the majority view of Whorfianism. I think that this view is mistaken, indeed radically mistaken. In my interpretation, Whorf is primarily a *metaphysician* in "the grand tradition." He proposes a notion of the totality of reality–a Metaphysical Hierarchy. And he proposes a way for individuals to "move up" through this Hierarchy with an eye toward some sort of human perfection. As one moves up in the Hierarchy, one becomes more and more knowledgeable about the totality of reality, and becomes more and more understanding of the Human Condition, and thus more compassionate towards one's fellow humans. One can undertake this "moving up" primarily by understanding how one's language makes one look at the world in a certain way. And this understanding can most easily come about by learning other languages, and thereby learning how these new languages make one look at the world in a certain way. Therefore, Whorf's linguistic relativity is *epistemological*, for it is essentially people's *knowledge* about the world that is relative depending upon the language(s) they speak.

It should thus be noted that this means there is no "Whorfian straightjacket" since one can always learn a new language and in that way come to understand how one's native language has made one view the world in some particular way. And so Whorf does not believe in linguistic *determinism* even though he does believe in linguistic *relativity*. This viewpoint also shows that in Whorf's mind there is no firm distinction between a weak and a strong hypothesis. Linguistic relativity applies to *individuals*, and individuals can be more or less linguistically sophisticated. Thus, for some individuals, the structure and composition of their thoughts about the world will be completely and unconsciously influenced by and dependent upon the grammatical features of their native language, whereas for other individuals, perhaps only some of their thoughts about the world will be thus influenced and dependent, and others of their thoughts will be "most nearly free" from the categories of their native language, to use Whorf's words (Whorf, 1940c, 214). And in any case, according to my interpretation, Whorf thinks that a person can always learn a new language and thereby force a change in what sort of grammatical features are influencing one's current perception of the world.

In my interpretation, Whorf does *not* cite features of other languages as a *proof* that linguistic relativity is true. Instead, he has *assumed* that linguistic relativity is true. It is an a priori *philosophical* thesis for him, and his citations of how other languages operate are merely meant to give the reader an appreciation of the range of perspectives available to different languages. But it is not intended as proof in any sense, for Whorf takes it for granted that everyone agrees with the view that features of the language one thinks in will affect one's thoughts. This means that any attempt to prove empirically "the Whorfian hypothesis" does not accurately capture Whorf's intent, for he does not think that it is an empirical matter; and whatever the evidence that is gathered, he would claim it is in accordance with the view that one's language influences how one conceptualises the world.

It should also be noted that attempts to employ Whorfianism as a way to understand *ideological* differences within a given linguistic community or even across different linguistic communities (e.g., some gender studies and other communitarian views of how the use of language influences the thoughts and attitudes of groups and subgroups in a society) are peripheral or completely removed from Whorf's project. Whorf is mainly concerned with the ways that people of different language communities perceive objective reality, although he does believe that to understand and appreciate how others view the world will result in a greater understanding and appreciation of each other.

I hope to have shown that within the writings of Whorf, there are some interesting ideas worthy of consideration. I think that Whorf's enterprise–to discuss the relationship between language, thought, and the world–is important and relevant, and that his contributions should not be ignored. As Hill notes:

> ...the study of linguistic relativity must remain central to the linguistic enterprise, for it is only through such study that we can rise above "habitual thought and behaviour" to the level of reflective consciousness and appreciation of the patterns and possibilities of our own language, and an understanding of the full range of the richness of human thought reflected in the languages of the world. (Hill, 31)

It does not matter whether or not one agrees with everything Whorf and his supporters say, but what is important, at least for Whorf, is that one think about and reflect upon the ideas presented in his works. Lakoff remarks that:

> ...a *refusal* to recognize conceptual relativism where it exists does have ethical consequences. It leads directly to conceptual elitism and imperialism–to the assumption that our behaviour is rational and that of other people is not, and to attempts to impose our way of thinking on others. Whorf's ethical legacy was to make us aware of this. (Lakoff, 337)

I think that Whorf was interested, above all, in the state of human affairs, and his ideas should perhaps be considered in light of his laudable humanitarianism.

Finally, I certainly support and have interest in the efforts of researchers insofar as they are trying to determine the nature of the relationships between language, thought, and the world. They should, however, realise that their empirical investigations, as important as they are, may never prove *Whorf's* theoretical notions. Nonetheless, if they can prove *something* about the issues with which Whorf was concerned, or at least provide deeper insight into them, then I believe that they are still doing a service to Whorf's interests.

In addition to the sorts of empirical studies of linguistic relativity discussed herein, I would be very interested in further study of the more philosophical, theoretical approaches to issues surrounding the relationships between language, thought, and the world.

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